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STATE OF MONTANA
Department of Natural Resources and Conservation

Annual Report

for Fiscal Year 2000

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July 1, 1999, to June 30, 2000

STATE OF MONTANA
Department of Natural Resources and Conservation

MISSION STATEMENT

To help ensure Montana's land and water resources provide benefits for present and future generations.

GUIDING PRINCIPLES

1. We obey the law.
2. We tell the truth.
3. We follow through on commitments and are accountable for our actions.
4. We believe in being fiscally responsible for the taxpayer's money.
5. We invite the public to participate in our actions and decisions.
6. We provide prompt and courteous service to all our customers.
7. We value and trust one another and strive for a healthy and productive work environment.

STATE OF MONTANA
Department of Natural Resources and Conservation

Annual Report

for Fiscal Year 2000

July 1, 1999, to June 30, 2000

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DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION



MARC RACICOT, GOVERNOR

1625 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-2074
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HELENA, MONTANA 59620-1601

Dear Reader:

Welcome to the annual report of the Department of Natural Resources and Conservation (DNRC). Our mission is "to help ensure Montana's land and water resources provide benefits for present and future generations." This annual report covers DNRC's programs and the accomplishments that occurred during Fiscal Year 2000 (which ended on June 30, 2000). It has been another very productive year for the department, and we have made great progress in many different areas.

Some of the highlights from this year's report include:

- Expansion and oversight of a \$153,778,760 loan portfolio for the coal tax, water pollution control, and drinking water loan programs within the Conservation and Resource Development Division
- Providing legal and fiscal review for over 300 contracts and grants with a total value exceeding \$40 million through the Centralized Services Division
- Providing technical assistance to 870 non-industrial private landowners through the Forestry Division, which was a 20 percent increase over the previous year
- Installing a new interactive website that enables public access to well records and well production through the Board of Oil and Gas Conservation (www.bogc.dnrc.st.mt.us)
- Congress approved the landmark Chippewa Cree Water Rights Settlement which authorized \$45 million for water development on the Rocky Boy's Reservation following eight years of negotiations between the Reserved Water Rights Compact Commission, the Tribe, and the United States
- Depositing over \$49 million in earnings and interest directly to the public schools and other entities through the Trust Land Management Division
- Drought monitoring, assessment, and preparedness, with local communities and water users was a key focus of the Water Resources Division

I hope you will find this report both informative and useful. Please let me know how you feel we are doing and what we can do to serve you better.

Sincerely,

A handwritten signature in black ink, appearing to read "Arthur R. Clinch".

Arthur R. Clinch
Director

INTRODUCTION



INTRODUCTION

“Helping to ensure Montana’s land and water resources provide benefits for present and future generations” is the mission of the Montana Department of Natural Resources and Conservation (DNRC).

First established in 1971 as a result of the Executive Reorganization Act of 1971, the department provides leadership in managing the state’s natural resources. In 1995 the department was reorganized as part of the reorganization of Montana’s natural resource and environmental agencies. It is presently responsible for promoting the stewardship of Montana’s water, soil, forest, and rangeland resources and for regulating forest practices and oil and gas exploration and production.

Department Organization

The director of the Department of Natural Resources and Conservation is Arthur R. “Bud” Clinch.

As shown in Figure 1, nine boards and commissions are attached to the department. Six of them — the State Board of Land Commissioners, Reserved Water Rights Compact Commission, Board of Oil and Gas Conservation, Board of Water Well Contractors, Montana Grass Conservation Commission, and Montana Agricultural Heritage Commission — have decision-making authority. The other three — the Resource Conservation Advisory Council, Rangeland Resources Committee, and Drought Advisory Committee — act in an advisory capacity only.

The department is organized into seven divisions:

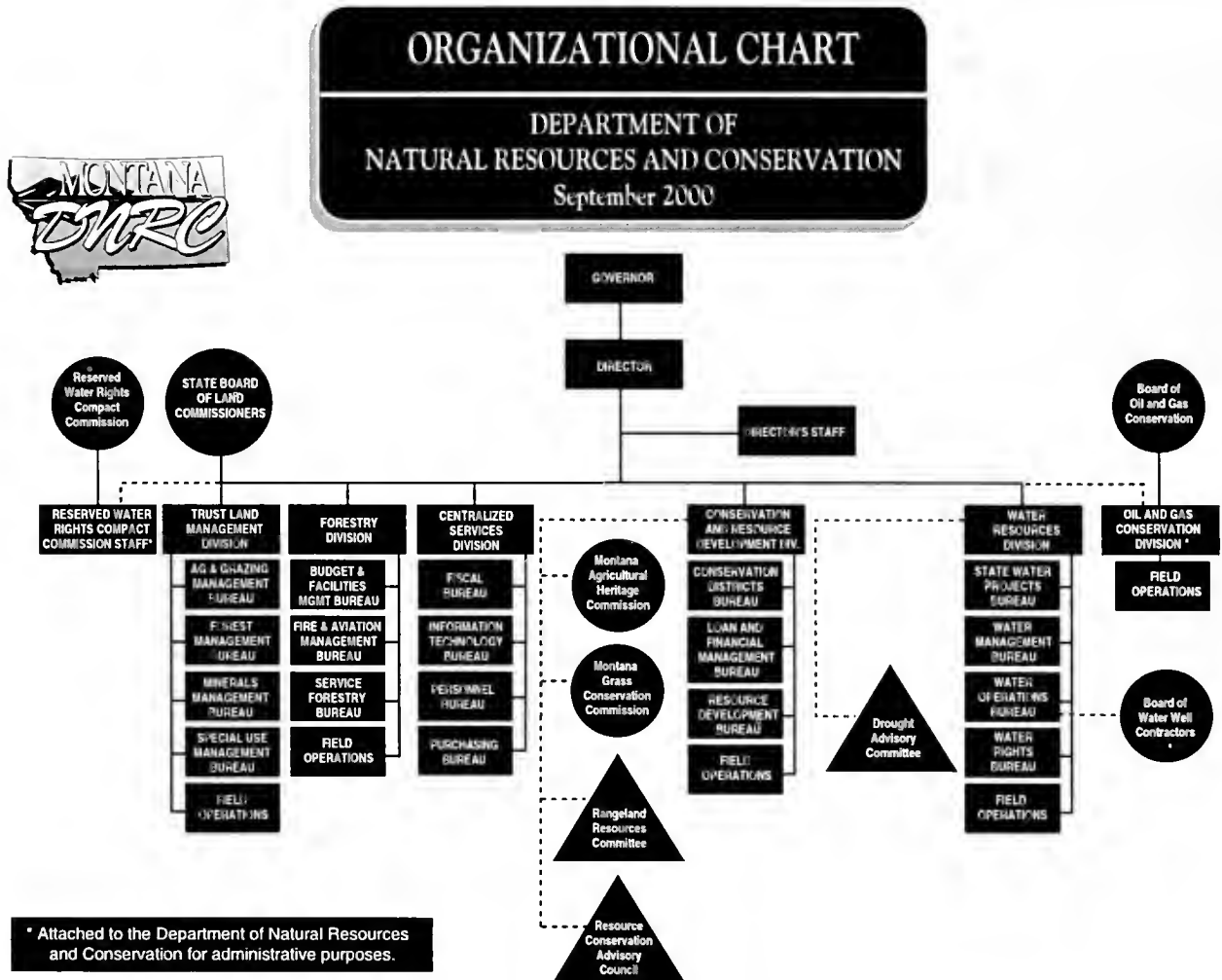
- Centralized Services Division
- Conservation and Resource Development Division
- Forestry Division
- Oil and Gas Conservation Division
- Reserved Water Rights Compact Commission
- Trust Land Management Division
- Water Resources Division

Two of the divisions — the Oil and Gas Conservation Division and the Reserved Water Rights Compact Commission — are attached to the department for administrative purposes only.



Arthur R. “Bud” Clinch, Department Director

Figure 1



Division Duties and Responsibilities



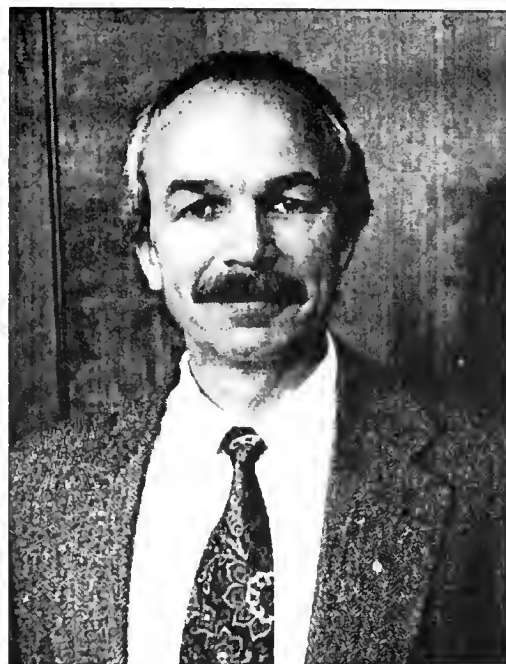
Ann Bauchman, Division Administrator

Centralized Services

The Centralized Services Division provides administrative and operational support to all divisions. Support services include financial management, purchasing, data processing, personnel, legal, reception, and mail. The division coordinates information services and prepares publications and graphic materials for printing. Trust revenues are collected and distributed, and ownership records for trust and nontrust lands are maintained.

Conservation and Resource Development

The Conservation and Resource Development Division coordinates, supervises, and provides financial and technical assistance to Montana's 58 conservation districts, and it provides technical, financial, and administrative assistance to public and private entities to complete projects that put renewable resources to work, increase the efficiency with which natural resources are used, or solve recognized environmental problems. The division provides administrative support to the Montana Grass Conservation Commission and the Montana Agricultural Heritage Commission (which is attached to DNRC under a Memorandum of Understanding with the Montana Department of Agriculture). The division receives advice and guidance from two other attached bodies: the Resource Conservation Advisory Council and the Rangeland Resources Committee.



Ray Beck, Division Administrator

Forestry

The Forestry Division protects the state's forested and nonforested watershed lands from wildfire; provides aviation services; operates a nursery and provides shelterbelt, windbreak, wildlife habitat improvement, reclamation, and reforestation plantings on state and private lands; and regulates forest practices and wildfire hazards created by logging or other forest management operations on private lands.



Don Artley, Division Administrator

Oil and Gas Conservation



Tom Richmond, Division Administrator

The Board of Oil and Gas Conservation and its technical support staff are attached to the department for administrative purposes. The quasi-judicial board is comprised of seven members consisting of industry representatives, landowners, and an attorney. They administer Montana's oil and gas laws and the federal Underground Injection Control Program to promote conservation and prevent waste in the recovery of these resources through regulation of oil and gas exploration and production. The board and its staff issue drilling permits; classify wells; establish well spacing units and land pooling orders; inspect drilling, production, and seismic operations; investigate complaints; conduct engineering studies; and collect and maintain complete well data and production information.

Reserved Water Rights Compact Commission



Susan Cottingham, Division Administrator

The Reserved Water Rights Compact Commission, which is also administratively attached to the department, was created by the legislature in 1979 as part of the water rights adjudication effort. Commissioners are appointed by the governor, the attorney general, the speaker of the House of Representatives, and the president of the Senate. The nine-member commission and its support staff negotiate water rights with Indian Tribes and federal agencies to establish a formal agreement on the amount of water to be allocated to each interest.

Trust Land Management

The Trust Land Management Division is responsible for managing the surface and mineral resources of forested, grazing, agricultural, and other classified state trust lands to produce revenue for the benefit of Montana's public schools and other endowed institutions. The State Board of Land Commissioners oversees the administration of the state trust land in Montana, as directed by the Montana Constitution. This board consists of Montana's top elected officials: the governor, superintendent of public instruction, secretary of state, attorney general, and state auditor.



Jeff Hagener, Division Administrator

Water Resources

The Water Resources Division is responsible for many programs associated with the uses, development, and protection of Montana's water. The division also develops and recommends water policy to the director, governor, and legislature. The division consists of an administration unit and four bureaus: water management, water rights, state water projects, and water operations. Attached to the Water Operations Bureau is the 6-member Board of Water Well Contractors, a quasi-judicial board that can issue, suspend, or revoke licenses; promulgate rules and regulations; investigate complaints; and hold disciplinary hearings. The 18-member Drought Advisory Committee is also attached to the Water Resources Division.

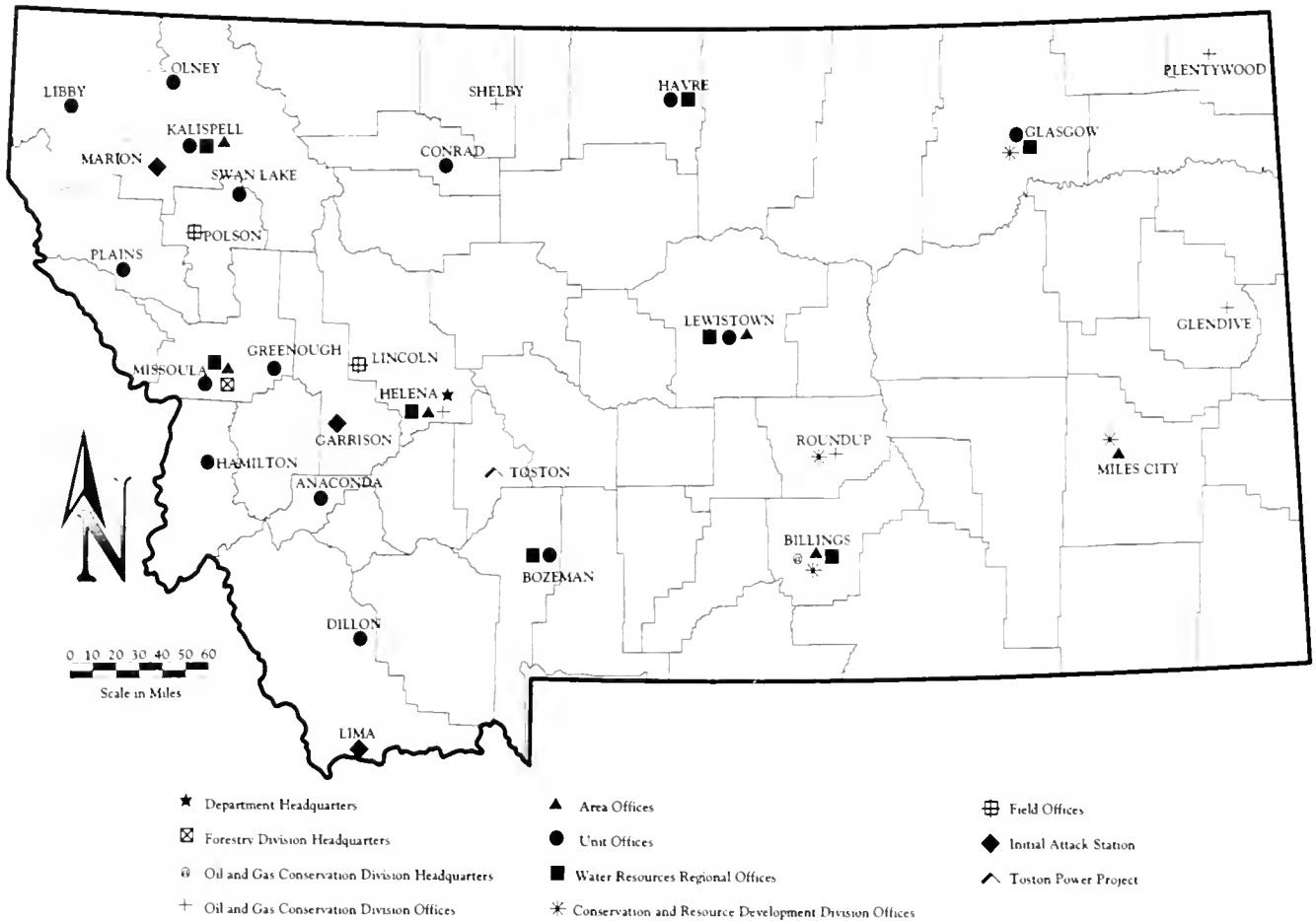


Jack Stults, Division Administrator

Field Offices

Although the department headquarters is located in Helena, the field operations for the department's programs are performed through field offices and personnel located in 28 different communities (see Figure 2). Included are both full time and seasonal employees from the Conservation and Resource Development, Forestry, Oil and Gas Conservation, Trust Land Management, and Water Resources Divisions.

Figure 2
Location of Department of Natural Resources and Conservation Offices



Financial Information

Table 1 presents overall expenditures and funding of the Department of Natural Resources and Conservation for Fiscal Year (FY) 2000. Information on two of the department's funding sources, the Resource Indemnity Tax and the Coal Severance Tax, can be found in Appendix A.

Table 1 Department of Natural Resources and Conservation Expenditures and Funding in Fiscal Year 2000			
	Budgeted	Nonbudgeted	Total
EXPENDITURES			
Personal Services	\$20,744,187	0	\$20,744,187
Operating Expenses	14,658,404	\$299,291	14,957,695
Equipment	778,670	0	778,670
Capital Outlay	1,277	370	1,647
Local Assistance	221,000	0	221,000
Grants	3,102,360	0	3,102,360
Benefits and Claims	1,600,977	0	1,600,977
Transfers	355,419	105,593,034	105,948,453
Debt Service	<u>522,244</u>	<u>9,482,449</u>	<u>10,004,693</u>
TOTAL	\$41,984,538	\$115,375,144	\$157,359,682
FUNDING			
General Fund	\$22,653,665	0	\$22,653,665
State Special Revenue Fund	15,652,759	\$35,702,400	51,355,159
Federal Special Revenue Fund	2,741,279	26,954	2,768,233
Debt Service Fund	0	13,011,725	13,011,725
Capital Projects Fund	588	0	588
Proprietary Fund	936,247	[-5,163]	931,084
Agency Fund	0	59,906	59,906
Trust Funds	<u>0</u>	<u>66,579,322</u>	<u>66,579,322</u>
TOTAL	\$41,984,538	\$115,375,144	\$157,359,682

CENTRALIZED SERVICES DIVISION



CENTRALIZED SERVICES DIVISION

Provides managerial, administrative support, information, computer, legal, and personnel services to all divisions of the department.

The Centralized Services Division (CSD) provides managerial and legal services to the department through the Director's Office. The division also manages all financial activities, contracting, and procurement; oversees personnel policies and functions; coordinates computer systems; performs public information and media relations tasks; produces publications and graphic materials; and provides general administrative support services. Support services include payroll, data entry, reception, and mail. Fiscal responsibilities include trust revenue collection and distribution, as well as bond and loan accounting.

In Fiscal Year (FY) 2000, the division concluded the migration to PeopleSoft software, adding the financial module as part of the Statewide Accounting, Budgeting, and Human Resources System (SABHRS).

The Personnel Bureau continued to revise and update policies, assist managers in completing a variety of human resource activities, and oversee the classification and recruitment and selection processes. Over 100 positions were reclassified, and approximately 35 permanent positions were filled. In addition, a large number of seasonal positions were filled. Two Requests for Proposal (RFPs) were released — one for position description writing, and one for classification work. Contracts will be awarded in mid-July 2000. Contracting classification work continues to be a very cost-effective and efficient process.

Payroll continued to be a challenge, particularly with numerous seasonal employees. Payroll processing seems to take considerably more time with the new system; however, system upgrades and additional experience should help reduce the time required. The Payroll Section also completed a major cleanup and purge of older paper records.

The Procurement and Contracting Bureau acted on over 460 requisitions for the procurement of goods and services. The bureau also participated with a variety of field personnel in establishing legal, cost-efficient, and quick methods to procure urgently needed commodities and services. Over 300 contracts, grants, and amendments (with a total value of over \$40.4 million) were reviewed for legal and fiscal compliance, and contractual requirements (such as liability insurance and workers compensation coverage) were monitored. Bureau staff responded to various departmental matters such as risk management and tort claims, the training of other state employees in the use of PeopleSoft software, the Leased Vehicle Program, and the ProCard, which is a credit card to be used by all state employees. The bureau continues updating the department's purchasing and contracting manual to comply with recent legislative and legal mandates; this manual will be posted on the DNRC website.

In Fiscal Year 2000, the Information Technology Bureau (ITB) completed a yearlong project to attach nearly all of DNRC's field offices to the state's computer network. Twenty-two offices, each with three or more users, were networked. This project provides each employee in those offices with access to the state's e-mail system, the Internet, and the state's mainframe computer.

A second large ITB project started during Fiscal Year 2000 was the redesign of the trust land management computer system. Work began to migrate the aging mainframe system to a more efficient and user-friendly network and PC-based system.

ITB provided leadership and staffing for a DNRC Public Information Task Force consisting of representatives from all divisions, an area land office, and a regional water office. The task force was successful in developing the *DNRC Public Information Policy* and the *DNRC Public Information Plan*.

Editing, illustrating, design, and layout services were provided for department publications ranging from general interest brochures to highly technical research reports.

An ITB staff member who serves as the Montana liaison to the U. S. Board on Geographic Names handled petitions, letters, and phone calls concerning changing certain place names in Montana, including those that use the words "*Pompey's Pillar*," "*Sacajawea*," or "*Marias*." The liaison also serves on the Advisory Group for HB 412, which has the responsibility of recommending new names for numerous places in Montana that include the word "*Squaw*."

Over 19,000 payments were processed during FY 2000 by the Fiscal Bureau, which also coordinated two general obligation bond sales totaling \$6.3 million. Assistance was provided to legislative auditors as they proceeded with the Fiscal Year 1999/2000 department audit. More than 30,000 checks were received, deposited, and distributed within trust, federal, and state special revenue accounts. Fiscal staff attended formal training on the new SABHRS financial module and conducted intradepartmental cross training on new aspects of SABHRS.

CONSERVATION AND RESOURCE DEVELOPMENT DIVISION



CONSERVATION AND RESOURCE DEVELOPMENT DIVISION

Provide technical and financial assistance to local governments, state agencies, and private citizens for the conservation, development, protection, and management of the state's natural resources.

The Conservation and Resource Development Division (CARDD) helps manage natural resources and finances conservation, resource management, and reclamation activities. The division has 23 full-time employees who administer the work of the Conservation Districts Bureau, the Financial Development Bureau, and the Resource Development Bureau. The division also administers the Montana Agricultural Heritage Program.

Montana Agricultural Heritage Program

The Montana Agricultural Heritage Act was passed by the 1999 Legislature in recognition of the growing need to protect Montana's rural and natural heritage. It created the Montana Agricultural Heritage Program to contribute state funding toward the purchase of agricultural conservation easements on family farms, ranches, and forestlands with significant public values.

The Montana Agricultural Heritage Commission directs the program. This commission is a 12-member citizen council appointed by the governor and the legislature to oversee the distribution of these state funds. The commission is allocated to the Montana Department of Agriculture for administrative purposes. The Department of Agriculture has entered into a Memorandum of Understanding with the Department of Natural Resources and Conservation for this administration. Current commission members are:

Randy Smith, Glen, Chair	Chris King, Winnett
Dennis DeVries, Polson	Thorn Liechty, Evaro
John Dietrich, Billings	Steve Luebeck, Butte
Bob Dompier, Great Falls	Ken Maki, Belt
Paul Gatzemeier, Billings	Art Neill, Whitehall
Charles Jarecki, Polson	Cecelia Reiner, Bozeman

Owners of land in Montana who are interested in receiving state funding for placing an agricultural conservation easement on their property may apply to the Montana Agricultural Heritage Commission for consideration. A landowner typically works with a land trust (or other qualified easement holder) and an accountant or attorney to negotiate the terms of an easement prior to making application to the commission. Grant funds may be used for:

- Payment for the value of a property interest sold by a landowner
- Payment of easement transaction costs (appraisal, title work, etc.)
- Payment of monitoring and enforcement costs borne by a land trust
- Leveraging of additional funding, donations, grants, or gifts for an easement acquisition

The types of activities permitted or prohibited by any particular agricultural easement must be determined on a case-by-case basis and must be consistent with the following core values:

- Conservation of family farms, ranches, and forestlands
- Conservation of rural landscapes
- Conservation of native wild species and their habitat

In March, the Montana Agricultural Heritage Commission completed its development of an application process. The commission considered over \$2 million in grant requests from nine applicants in its first review of applications to the program. In May, it announced its approval of \$388,000 in grants for the purchase of conservation easements involving 2,090 acres on three Montana properties (see Table 2). This expenditure will leverage over \$3 million in matching funds from other state, federal, and private sources, including the participating landowners themselves.

County	Special Values	Acreage	Grant Amount	Amount Leveraged
Flathead	Working ranch, scenic river, one of area's larger remaining tracts	1,200	\$ 38,000	\$1,006,000
Gallatin	Working ranch, elk winter range, open space	290	190,000	2,130,000
Powell	Working ranch, scenic river, wetlands	<u>600</u>	<u>160,000</u>	<u>276,128</u>
TOTAL		2,090	\$388,000	\$3,412,128

The commission continues to seek funding from federal and private sources to be matched with Montana Agricultural Heritage Program dollars.

Conservation Districts Bureau

Under state law, the Conservation Districts Bureau (CDB) is responsible for assisting Montana's conservation districts and state grazing districts. A conservation district (CD) is a legal subdivision of state government that (1) develops and carries out long-range programs that will conserve and improve soil and water resources within its boundaries, and (2) encourages maximum participation by the general public and all local public and private agencies to fulfill this purpose.

State law also directs the department, through the Montana Grass Conservation Commission, to supervise and coordinate the formation and operation of grazing districts. Grazing districts are cooperative, nonprofit groups that set up permitting systems to aid in the management of grazing lands where land ownership is intermingled in order to conserve, protect, restore, and properly utilize grass, forage, and range resources. The 1999 Legislature created the Montana Grass Conservation Commission to assume the department's grazing district responsibilities effective July 1, 1999.

- Conservation district supervision and assistance
- Watershed efforts and projects
- Rangeland management coordination
- Grazing district supervision and assistance
- Stream protection
- Natural resource conservation education activities
- Riparian management
- Grant and loan programs
- Resource conservation and development (RC&D) areas
- Salinity control

The bureau provides administrative, legal, and financial assistance to Montana's 58 conservation districts (see Figure 3) to help them identify and address local natural resource concerns. Because natural resource challenges are becoming more complex, conservation districts are requiring more complex technical assistance. The 1997 Legislature authorized several programs to provide districts with services and programs needed to carry out their statutory responsibilities effectively. Legal services are provided to conservation districts either through a legal services contract with CDB or by a direct grant. To date, legal services have been used for water reservation issues, contract reviews, 310 advice, and assistance to four conservation districts that are developing a large rural water project in eastern Montana.

[illegible]

In FY 2000, three workshops were conducted to inform conservation districts of legal issues pertaining to contracting and the 310 law. The Conservation Districts Bureau assisted with the inclusion of the City of Columbus within the Stillwater CD boundaries, conducted two 310 workshops, assisted with the process of electing and nominating CD supervisors, distributed monthly information bulletins to CDs, and developed and distributed a CD employee handbook and a CD supervisor orientation video.

The Resource Conservation Advisory Council (RCAC), which consists of seven members serving at the pleasure of the governor, provides advice and assistance on conservation matters and sets guidelines for CDB's grant programs. Current RCAC members are:

Bob Breilpohl	Saco	Representing North Central Montana
Jamie Doggett	White Sulphur Springs	Representing the General Public
Robert Fossum	Richland	Representing Eastern Montana
Marieanne Hanser	Billings	Representing South Central Montana
Vicki McQuire	Eureka	Representing Western Montana
Dave Schwarz	Terry	Representing Conservation Districts
Tom Stelling	Fort Shaw	Representing Conservation Districts

The Conservation Districts Bureau also works with the Montana Association of Conservation Districts (MACD) and the National Association of Conservation Districts (NACD) to address natural resource concerns.

Watershed Efforts and Projects

Through the capacity-building program, conservation districts have identified the need for watershed planning as a high priority goal. Conservation districts, as the local entity responsible for addressing nonpoint source (NPS) water pollution, play a key role in developing local watershed plans. CDB participates on the Watershed Coordinating Council, a group of state and federal agencies and private organizations that coordinates programs in Montana that address aspects of watershed management. CDB also provides technical and financial assistance to conservation districts in support of watershed efforts.

The bureau assisted four conservation districts in the upper Clark Fork River basin with organization of a coalition to address watershed restoration needs. The group, called the Watershed Restoration Coalition of the Upper Clark Fork, includes representatives of CDs, weed districts, and counties. It plans to initiate restoration on a watershed basis using Natural Resource Damage Program funds as well as other federal, state, and local sources.

CDB worked with three conservation districts in northwest Montana to pursue market-based conservation activities within the state. The CDs have formed a non-profit corporation called Montana Watershed, Inc., and contracted with the Montana Department of Transportation to identify, plan, and monitor wetland mitigation projects required under federal regulations. The group is also working to improve water quality and help offset the impacts of carbon dioxide emissions through reforestation projects funded by market-based trading of carbon credits.

The bureau is providing administrative, technical, and financial assistance to the Yellowstone River Conservation District Council. The council is made up of 11 conservation districts encompassing the Yellowstone River watershed. The purpose of the council is to provide local leadership, assistance, and guidance for the wise use and conservation of the Yellowstone River's natural resources.

Rangeland Management Coordination

The Rangeland Resource Program has four major areas of emphasis. They include:

- Working with county range committees, conservation districts, and producer groups to foster sound rangeland management
- Encouraging coordination and cooperation between private, state, and federal entities involved in range management
- Administering the Rangeland Improvement Loan Program
- Co-sponsoring the Governor's Range Tour, Winter Grazing Seminar, and Youth Range Camp

The program receives guidance from the Rangeland Resource Executive Committee, which is composed of six ranchers, geographically located across the state and appointed by the governor. Current members include:

Les Gilman, Chair Alder	John Hollenback, Vice-Chair Gold Creek	Bob Anderson Culbertson
Quinn Haughian Terry	Steve Hedstrom Raynesford	Michael Lane Three Forks

In addition, an ad hoc committee of agency and organization personnel serves in an advisory capacity to the executive committee.

CD staff work to strengthen local grazing management programs by helping sponsor workshops, tours, and demonstration projects. Twenty-three workshops were conducted through our Riparian Workshops Grant Program using U.S. Environmental Protection Agency (EPA) Wetland funds. Examples of these conservation-district-sponsored workshops include Monitoring for Success Workshops, the Governor's Range Tour, the Montana Youth Range Camp, and the Winter Grazing Seminar.

A loan program was started in 1979 for the purpose of improving rangelands in Montana. To date, 195 applications have been received for loans totaling \$3,583,789. Currently, 44 loans totaling \$579,000 are in repayment status. A typical rangeland loan project involves drilling a well and installing underground water lines to supply stock tanks. These stock tanks are usually located in areas where water is insufficient or unsuitable for livestock. The projects are sometimes combined with cross fencing and an overall grazing plan to improve the rangeland. Over 750,000 acres of Montana rangeland have been improved using funds from this program.

Grazing District Supervision and Assistance

State law provides for the creation of cooperative, nonprofit grazing districts and sets up a permitting system that aids in the management of grazing lands where ownership is intermingled. In its administration of the Montana Grass Conservation Act (grazing district law), the Montana Grass Conservation Commission advises, supervises, and coordinates the formation and operation of these grazing districts. Uniform plans that conform with recognized conservation practices are developed for the use of lands within the boundaries of the districts. The 27 state grazing districts represent 1,353 permittees and cover 10,501,070 acres of land.

The commission is composed of these five board members, who are affiliated with local grazing districts.

Bill Loehding, Chair	Billings
Gary Unruh, Vice-Chair	Chinook
Sandra Brown	Terry
Phil Hill	Mosby
Dewayne Ozark	Glasgow

Stream Protection

CDB provides administrative assistance, training, and legal opinions to conservation districts to help them administer the Natural Streambed and Land Preservation Act, commonly referred to as the “310 law.” Under this law, any private entity proposing a project that will alter or modify the bed or banks of a stream must obtain a permit.

CDB coordinated the development of a joint stream permit application. A new process allows applicants to apply for federal, state, and local permits for work in streams and wetlands on a single application form, which is used by the U.S. Corps of Engineers, DNRC, the Montana Department of Environmental Quality (DEQ), the Montana Department of Fish, Wildlife and Parks (DFWP), floodplain administrators, and conservation districts. The new process makes it easier for applicants to apply for a myriad of permits to do work in Montana’s waterways. It is available from participating agencies and online.

Other efforts to improve the permitting process include:

- Revising and updating the *Guide to Stream Permitting in Montana*
- Developing a project review guide for conservation district supervisors and DFWP biologists
- Printing a booklet on the 310 law, administrative rules, and attorney general opinions
- Conducting a workshop on the Natural Streambed and Land Preservation Act for conservation district supervisors

Two firms are under contract to provide engineering reviews of complex 310 projects. Approximately 26 reviews were conducted in FY 2000. Over \$78,000 was distributed to 50 conservation districts to offset the costs of administering the 310 law. Another \$16,000 was provided to conservation districts along the Yellowstone River to conduct an inventory of structures in the river. The information gathered will be used to evaluate new 310 applications for work in the Yellowstone River.

Assistance in developing work plans, writing grant applications, and developing requests for proposals was provided to the Yellowstone River Conservation District Council to begin an assessment of the past and present geomorphology of the Yellowstone River. The council formed with the intention of gathering information and participating in a federal cumulative effects study of the river.

Natural Resource Conservation Education Activities

This program provides grant funding and policy guidance for resource conservation education programs. The bureau assists conservation districts in sponsoring adult education, elementary and secondary school activities, and several annual events: the Envirothon, Youth Range Camp, and Natural Resources Youth Camp. The program goals are to promote discussion of resource issues and provide the knowledge and skills necessary to make decisions regarding the management, protection, and wise use of our natural resources.

CDB administered a grant authorized by the 1999 Legislature to conduct the 2000 Envirothon. The Youth Range Camp operates on donations and other grants.

Conservation Education Mini-Grant Program

Mini-grants of \$500 each are available to educators statewide, enabling teachers to develop environmental education projects around local resource issues. The grant program encourages classroom discussion of resource conservation and environmental issues in secondary and elementary schools, by providing financial support for teacher-initiated classroom projects. Through its 10 years, the mini-grant program has funded 199 classroom projects statewide, with \$108,727 in grant funds. The 26 mini-grant projects that were funded in FY 2000 for \$13,780 are listed in Table 3.

Table 3
Conservation Education Mini-Grants Awarded in FY 2000

Conservation District	Project	Amount
Bitterroot #1	Darby Community Summer Wildlife Camp	\$ 250
Bitterroot #2	Teller Wildlife Refuge, Wonders of Winter Program	500
Bitterroot #3	Florence-Carlton School, Outdoor Classroom	500
Cascade County #1	Ulm School, GLOBE Program	500
Cascade County #2	West Elementary and North Middle Schools, GLOBE Program	1,000
Deer Lodge Valley	Arbor Day Celebration	69
Eastern Sanders County	Plains High School, GLOBE Program	500
Fergus County	Junior High, Weather Monitor II System, GLOBE Program	500
Flathead #1	Community River Connection Field Day	500
Flathead #2	Family Forestry Expo	500
Gallatin #1	Raptors of Montana	500
Gallatin #2	Sourdough Creek Water Quality Study	496
Gallatin #3	Groundwater Flow Model, Water Quality District	500
Gallatin #4	Outdoor Classroom	500
Gallatin #5	Watershed Education, Grades 2-3, Irving School	1,713
Glacier County	Cut Bank Middle School, GLOBE Program	1,000
Hill County	Lincoln-McKinley School, Milk River Research	500
Judith Basin	Natural Resource Management Interactive CD-ROM	244
Liberty County	Joplin Inverness High School, GLOBE Program	500
Lincoln	Troy Schools, GLOBE Program	500
Missoula County	K-3 Weed Education Program	300
Richland County #1	Fairview High School Ag-Land Lab, Irrigation Equipment	500
Richland County #2	Savage Elementary School, Outdoor Education Day	217
Teton County	Creeks and Critters Outdoor Classroom	500
Valley County	Grade 5, Outdoor Education Day	500
Yellowstone	Water Quality/Benthic Macroinvertebrate Study	491
TOTAL		\$13,780

Small Acreage Stewardship Education

The Conservation Districts Bureau is working cooperatively with the Montana State University Extension Service and the U.S. Natural Resources Conservation Service (NRCS) to create a small acreage stewardship curriculum. Three pilot workshops were completed this past winter using a draft curriculum. Six of the nine draft modules were tested. The remaining three modules will be tested in workshops during the upcoming year.

The major benefits of this program are:

- Providing landowners with the tools to manage their property to meet their goals and address resource concerns
- Giving local resource agencies an opportunity to contact and develop working relationships with small acreage owners

The bureau is also coordinating with other states to produce curricula and materials to address the issue of small acreage stewardship and development.

Riparian Management

Proper management of riparian areas is critical to maintaining water quality, stream bank stability, and flood control. Since 1988, the bureau has coordinated a comprehensive riparian management program involving conservation districts, federal and state agencies, and private organizations. The purpose of the program is to promote proper riparian management by emphasizing the economic, ecological, and hydrologic benefits of these areas to landowners.

Program efforts for FY 2000 included:

- Providing 23 riparian contracts to conservation districts
- Assisting nine conservation districts with stream assessments
- Completing the update and reprint of the *Riparian Grazing Successes in Montana* booklet
- Coordinating a 7,500-copy reprint of the *Grazing Best Management Practices* booklet
- Developing the 2001 *Agricultural Riparian and Wetlands Calendar*

Grants have been received and private funds raised to pay for some of these projects.

Grant Programs

The bureau administers three grant programs (besides the conservation education mini-grants).

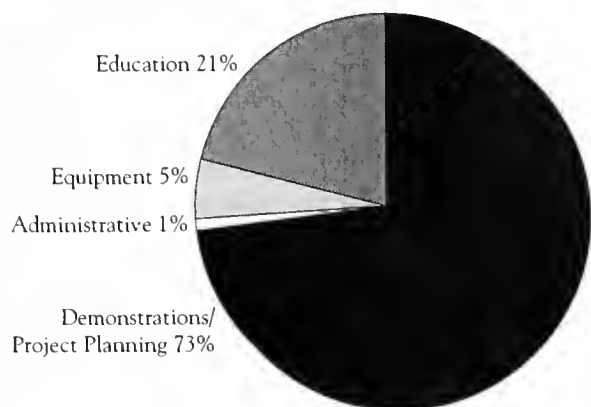
Conservation District Project Grants

The Conservation District Project Grant Program provided \$300,000 in FY 2000 from coal severance tax funds for natural-resource-related projects and activities. Funds are used to correct stream bank erosion and sedimentation problems; demonstrate new technology; and conduct soil and water conservation projects, youth and adult educational activities, and equipment rental programs. All projects funded in FY 2000 are listed in Table 4, and the allocation of funds is shown in Figure 4.

Table 4
Conservation District Project Grants Awarded in FY 2000

Conservation District	Project	Amount
Blaine County	Peoples Creek Efficiency Study	\$4,800
Broadwater #1	Big Springs Ditch Repair	10,000
Broadwater #2	Deep Creek Project Fencing	9,150
Carbon	Backyard Conservation	4,500
Carter County	New Supervisor Orientation	5,455
Cascade County #1	Sun River Film Project	700
Cascade County #2	Sun River Restoration	9,700
Cascade County #3	Benton Lake Wetlands Study	11,000
Conservation Districts Bureau #1	Speaker Expense	3,500
Conservation Districts Bureau #2	Supervisor Travel	4,100
Conservation Districts Bureau #3	Mini-Grants/DEQ Match	13,780
Custer County #1	Presentation Equipment	11,998
Custer County #2	Yellowstone River CD Council	20,000
Custer County #3	Winter Grazing Seminar 2000	4,576
Custer County #4	Yellowstone River CD Council	4,403
Fergus County #1	Composting Facility	2,900
Fergus County #2	Brewery Flats Revegetation	5,000
Fergus County #3	Big Spring Creek Cleanup	5,000
Gallatin	Composting Project	2,099
Garfield County	MACD Employee Organization Workshop	4,000
Judith Basin	Range Camp 2000	6,500
Lake County #1	Carbon Sequestration Meeting	7,000
Lake County #2	Wetland Mitigation	1,200
Lewis and Clark	Spring Creek Restoration	17,965
Madison	Winter Grazing Strategies	5,000
Mile High	Water Trust Development	13,680
Park #1	Shields River Restoration	9,023
Park #2	Levers Riparian Project	5,346
Park #3	Shields River Stabilization	15,000
Park #4	Shields River Stabilization	2,600
Park #5	Yellowstone River Bank Stabilization	10,960
Prairie County	Terry Drain Conversion	10,000
Richland County	Aquifer Quality/Quantity	7,500
Roosevelt County #1	Irrigation Water Management	5,000
Roosevelt County #2	Farm Assist Program	5,000
Roosevelt County #3	Dry Prairie Rural Water Association	20,000
Stillwater	Portable Electronic Scales	2,000
Sweet Grass County	Environmental Education	3,815
Yellowstone	Groundwater/Surface Water Study	<u>\$15,750</u>
TOTAL		\$300,000

Figure 4
Allocation of Grant Funds for Conservation District
Projects in Fiscal Year 2000



Administrative Grants

The bureau receives \$225,000 per year from the General Fund and the Coal Tax Fund for grants to districts whose county mill levies are inadequate to support district operations. These grant funds are for administrative purposes only and are used mostly for administrative salaries and office-related expenses. In FY 2000, grants were awarded to 42 CDs.

More information on the coal severance tax and the Resource Indemnity Trust (RIT) is presented in Appendix A.

Watershed Planning Assistance Grants

The 1997 legislature authorized the Watershed Planning Assistance Grant Program. The purpose is to assist conservation districts and affiliated local watershed groups with expenses associated with watershed planning. Funds can be used for the collection of baseline resource information, facilitators, development of a watershed management plan, training, educational efforts, and incidental costs associated with watershed planning.

A total of \$150,000 was available for grants in FY 2000. Applications were received from 18 districts for 19 projects. Six of the projects were for resource assessment, and 13 funded watershed groups, coordination, and/or coordinators. The resource areas included weeds, water quantity, and water quality. The size of these projects ranges from small watersheds to large basins. The projects funded are listed in Table 5.

Table 5
Watershed Planning Assistance Grants Awarded in FY 2000

Conservation District	Project	Amount
Beaverhead	Big Hole Watershed Coordinator	\$10,000
Big Sandy	Rapid Aerial Assessment	3,500
Bitterroot	Mill Creek Coordinator	5,000
Blaine County	Milk River Watershed Coordinator	10,000
Custer County	Yellowstone River Council	10,000
Fergus County	Aerial Assessment - Flatwillow Creek	10,000
Gallatin	Bozeman Watershed Council	10,000
Granite	Upper Clark Fork Steering Committee	10,000
Judith Basin ¹	Judith River/Arrowhead Creek Coordination	5,000
Lake County	Dayton/Falls Creek Assessment and Coordination	10,000
Lewis and Clark	Prickly Pear Coordinator	10,000
Lincoln	Bobtail Creek	10,000
Little Beaver	O'Fallon Creek Assessment	6,715
Lower Musselshell	Weed Coordination Workshop	1,925
Mile High	Weed Mapping II	3,000
North Powell	Blackfoot Challenge	10,000
Park	Upper Shields Watershed Plan	9,936
Park ¹	Yellowstone Watershed Land Use Assessment	7,065
Stillwater	Lake/Comanche Basin	<u>7,859</u>
TOTAL		\$150,000

1. Partially funded. Additional funds will be added at the beginning of FY 2001.

Resource Conservation and Development Areas

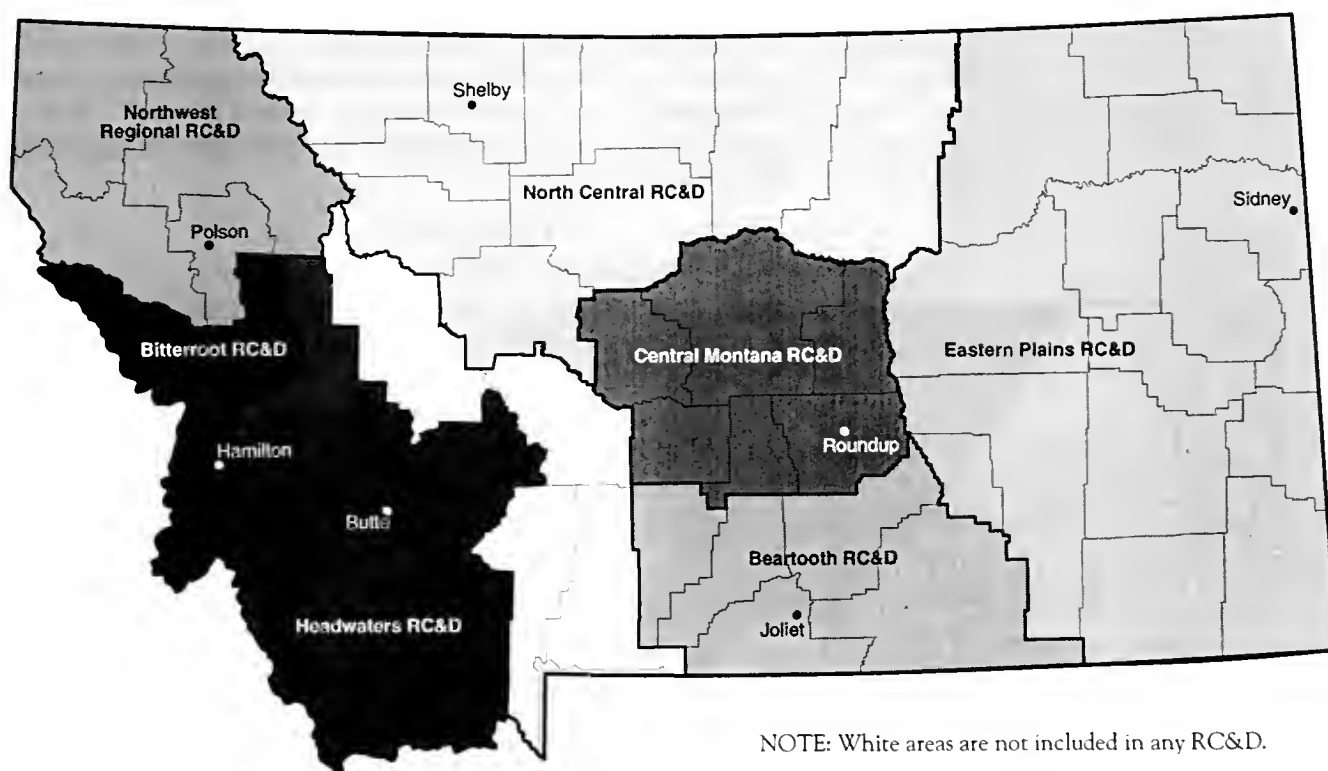
In a cooperative effort with the U.S. Natural Resources Conservation Service, the bureau has taken a lead role in assisting in activities of the NRCS partnership coordinator and the Central Montana RC&D Area. The partnership coordinator is currently helping develop key issues and providing direct assistance to the RC&Ds in Montana (see Figure 5). The Central Montana RC&D was involved in the following activities.

- Completed full audit of activities to date by outside audit firm. Adopted revised accounting procedures and annual audit policy.
- Facilitated the process of forming a six-county economic development district under the U.S. Department of Commerce's Economic Development Administration guidelines. Assisted area public meeting process, and authored comprehensive economic development strategy for the district.
- Received certification in the Campaign for Home Ownership Program through the Neighborhood Reinvestment Corporation. Provided First Time Homebuyers' Education to 40 individuals in the RC&D area. The training is required to participate in several mortgage lender programs. Twelve new home loans closed during the first year.
- Acquired funding and arranged for commission of a pre-feasibility study of the economic feasibility of a co-generation project to utilize wood waste from an existing area sawmill.

- Continued participation in the planning and implementation of a strategy to establish an education outreach program at Lewistown to serve the RC&D area with "Stay at Home" degree completion and specialized training.
- Established a RC&D area website.
- Facilitated the amendment process to the Rural Utility Service for utilization of approximately \$105,000 residual from the High Plains Education Consortium's interactive television grant, for expansion of the interactive television network to additional communities within the RC&D area.
- Completed administrative work activities for a Wetlands Education Monitoring Grant project.

The bureau also administers a \$50,000 appropriation for the Community Project Startup Grant Program, which is delivered through the Eastern Plains RC&D. The RC&D approved eight grants totaling \$25,000 in FY 2000.

Figure 5
Resource Conservation and Development Areas in Montana



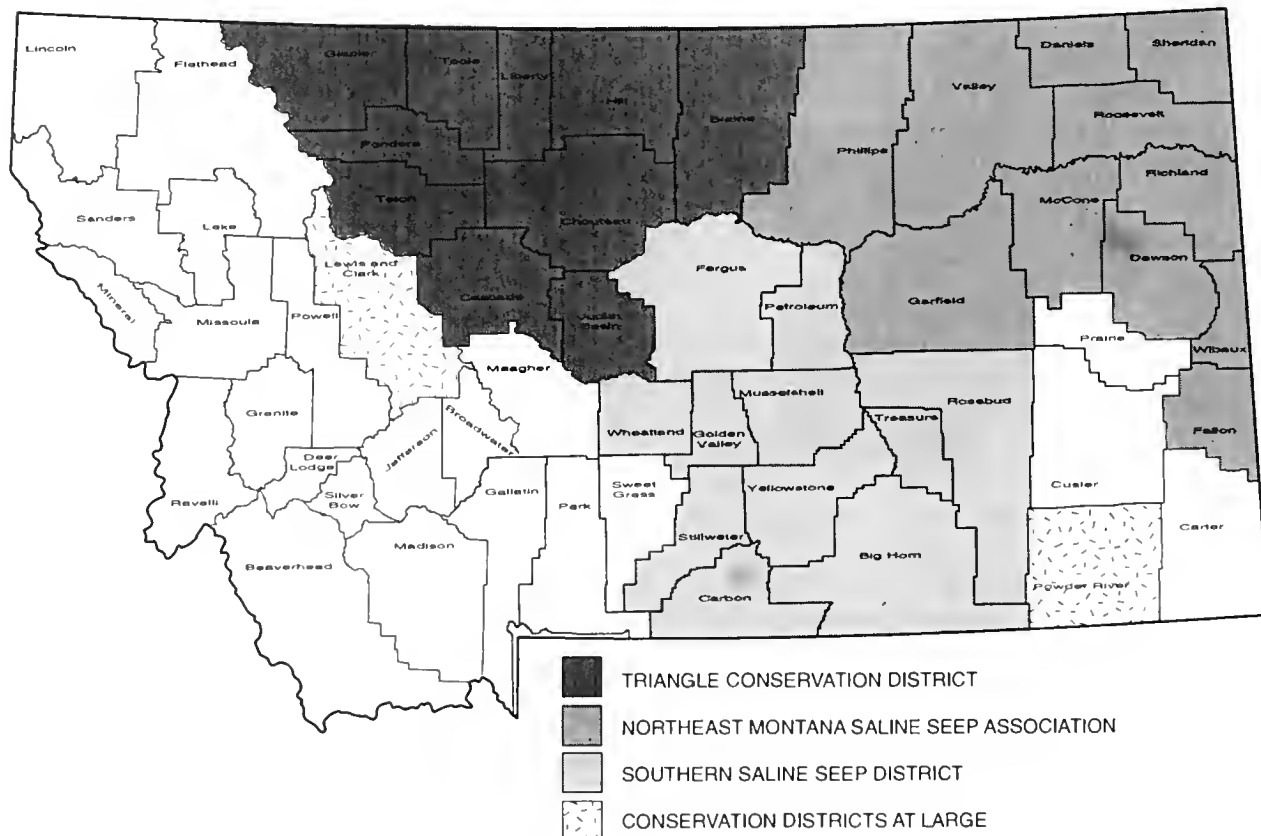
Salinity Control

The Montana Salinity Control Association (MSCA) is a group of conservation districts established to reclaim and prevent saline seeps and agriculturally-caused water quality problems, on an individual farm and/or watershed basis. MSCA originated in 1979 in 9 counties and now serves 34 (see Figure 6). MSCA is partially funded from mineral taxes administered by CARDD. Through the Conservation Districts Bureau, MSCA received \$225,000 in FY 2000. Additional funding comes from landowner and user fees for projects. Outside funding has been derived since 1983.

Conservative estimates indicate that over 300,000 acres in Montana are affected by salinity problems. MSCA has developed individual reclamation plans for 783 sites on 102,590 acres to address 12,913 salinized acres that were no longer productive. Eight salinity-based watershed projects, ranging in size from 4,000 to 625,000 acres, are in progress or completed. Each watershed project has a local advisory group that contributes funds and provides coordination between landowners and technical agencies. CDB is involved in the organization of individual and area watershed projects through local conservation districts.

MSCA coordinates with state and federal agencies to utilize and adapt their technical assistance and funding programs to address nonpoint source pollution and other resource concerns. In addition, MSCA has a strong relationship with Canadian provincial salinity specialists to share information through the Prairie Salinity Network. Similar cooperation has been established over the years through Australian research and landowner groups.

Figure 6
Montana Salinity Control Association



Financial Development Bureau

The Financial Development Bureau is responsible for preparing and managing the cash flow of the division's programs. The bureau also issues loans to borrowers and manages the financial administration of Montana's Water Pollution Control State Revolving Fund (WPCSRF) and Drinking Water State Revolving Fund (DWSRF) Loan Programs. The functions of the bureau include:

- Issuing general obligation bonds
- Issuing coal tax bonds
- Monitoring the operating budget of the division
- Preparing cash flows
 - Water Pollution Control Program
 - Drinking Water Program
 - Reclamation and Development Grants Program
 - Renewable Resource Grant and Loan Program
- Monitoring financial statements of public borrowers
- Monitoring arbitrage calculations for all DNRC bonds
- Administering loans made to public entities

With the passage of the WPCSRF and DWSRF legislation, the volume of work dictated the formation of the Financial Development Bureau. The loan portfolios alone have grown to over \$150 million.

Table 6
Loan Portfolios

Type of Loan	Amount
Coal Tax Loans	\$ 52,082,000
Water Pollution Control Loans	69,796,760
Drinking Water Loans	<u>31,900,000</u>
TOTAL	\$153,778,760

The disbursements to grantees can be as much as \$5 million per year. Approximately 750 to 1,000 contracts are outstanding at any one time. The financial expenditures on each contract must be tracked separately. Cash flows are produced on a monthly basis. For the revolving fund programs, investments must be made for repayment funds in the program.

Bond sales must be planned to meet the construction schedules of the borrowers. On the average, \$5 million to \$10 million in bonds are issued each year. Loan disbursements were over \$39 million in FY 2000.

State Water Pollution Control Revolving Fund Loans

The Water Pollution Control SRF was created by the 1989 Legislature. It is designed to combine federal grant money with state matching money to create a low-interest loan program that funds community wastewater treatment projects. DNRC and DEQ co-administer the SRF program. The U.S. Environmental Protection Agency (EPA) makes a grant of federal funds to the state. The state must match 20 percent of that grant. The state's share is derived from the sale of state general obligation bonds. Loans are made by DNRC to public entities at an interest rate of 4 percent for 20 years.

Since the program started, the State of Montana has issued \$14.3 million in general obligation bonds, and EPA has contributed \$55.6 million in grants, which accounts for the \$69.9 million program level. Thirteen loans were closed in the 2000 construction season for a total of \$16 million. The 1997 Legislature authorized this program to start financing landfills for small communities effective July 1, 1997, but no landfill loans have been made to date. See Table 7 for a listing of current loans and proposed loans.

The City of Glasgow borrowed \$1,048,000 at 4 percent interest in 2000. This project completed a storm sewer separation project on the north side of the city. Approximately 11,000 feet of new storm drains were installed. For a number of years, flooding has been a problem. This project will prevent that flooding.

Also in FY 2000, Kessler School in Helena borrowed \$185,000. The school had a failing septic tank. The school is now connected to the City of Helena's wastewater system.

Table 7
Wastewater Revolving Fund Loans

Loans Completed	Amount	Loans Completed	Amount
Big Sky #1	\$5,513,000	Lincoln Lewis and	\$ 310,000
Big Sky #2	417,000	Clark Sewer District	
Bigfork	1,000,000	Missoula	
Butte-Silver Bow	5,307,390	California Street	502,000
Cascade #1	202,000	Mullan Road	1,820,000
Cascade #2	1,218,000	NW Broadway	943,000
Columbus	1,540,000	Rattlesnake	304,000
Corvallis	410,760	Reserve Street	2,221,000
Cut Bank #1	531,000	Special Improvement District #520	2,634,000
Cut Bank #2	800,000	Wapikiya/Bellevue Add-on	324,000
Darby	111,000	Wapikiya/Bellevue Clarifier #1	2,465,000
Denton #1	55,000	Wapikiya/Bellevue Clarifier #2	1,177,000
Denton #3	176,000	Missoula County	
Dillon	2,065,000	Linda Vista #1	241,000
East Helena	91,000	Linda Vista #2	1,943,000
Flathead County		Park County #1	378,000
Bigfork	424,000	Park County #2	83,000
Evergreen #1	3,600,000	Red Lodge	390,000
Evergreen #2	700,000	Resource Development	1,500,000
Fort Benton	1,177,000	Bureau #1 Nonpoint Source	
Glasgow #1	402,000	Resource Development	1,750,000
Glasgow #2	1,048,000	Bureau #2 Nonpoint Source	
Glasgow #3	995,000	Ronan	623,000
Glasgow #4	252,000	Saint Marie (Glasgow)	150,000
Glendive #1	236,000	Shelby	481,000
Glendive #2	376,000	Superior	82,000
Harlowtown	777,000	Townsend	1,071,000
Havre	2,224,000	Troy	1,824,000
Helena	9,320,000	Valier #1	200,000
Hot Springs	200,000	Valier #2	19,000
Kalispell	3,913,000	Vaughn - Cascade	248,000
Kessler School	185,000	Victor	300,000
		Wolf Point	453,000
		Worden - Ballantine	<u>260,000</u>
		TOTAL	\$69,962,150

Proposed Loans - FY 2001	Amount
Big Sky	\$1,207,000
Columbia Falls	2,677,000
Corvallis	389,000
Drummond	90,000
East Helena	1,209,000
Great Falls	5,000,000
Missoula Pineview Special Improvement District	720,000
Missoula Reserve Street Special Improvement District	2,700,000
Missoula Revenue Bond - Pineview/Reserve Street	1,400,000
Red Lodge	<u>4,000,000</u>
TOTAL	\$19,392,000

Drinking Water State Revolving Fund Loans

This program provides funds for training, technical assistance, and the issuance of low interest loans to local governmental entities to finance drinking water facilities and implement the Safe Drinking Water Act. State enabling legislation was passed in 1995 and amended in 1997, after the U.S. Congress passed federal enabling legislation in August 1996. DNRC and DEQ co-administer the Drinking Water Program. The two agencies applied for the federal funds in January 1998. The state has issued \$6 million in general obligation bonds, EPA has obligated \$21 million, and \$5 million in recycled funds have also been used to fund loans. The outstanding loans total \$31.9 million (see Table 8).

Fourteen loans were closed in FY 2000 for \$24.4 million. One of those loans was to the City of Glendive. The project loan was for \$1.8 million at 4 percent. The project consisted of constructing a new intake structure and a clear well, modifying an existing clear well, and purchasing new pumps.

The Town of East Helena borrowed over \$3 million dollars at 3 percent interest. This community demonstrated a hardship and qualified for the lower interest rate. This project consisted of the construction and installation of 16,400 feet of new transmission lines; a new storage tank, pump, and telemetry system; and 18,000 feet of new distribution main.

These projects continue to improve the communities that participate in the loan programs. The loan interest rate also helps to make the projects affordable. No loans are made over the 4 percent interest rate.

Table 8
Drinking Water Revolving Fund Loans

Loans Completed	Amount
Boulder	\$1,294,000
Broadview	203,000
Brockton	45,000
Columbia Falls	907,000
Cut Bank #1	283,000
East Helena #1	228,000
East Helena #2	3,234,000
Elk Meadows	200,000
Glendive	1,829,000
Havre #1	600,000
Havre #2	8,401,000
Lakeside	400,000
Laurel	5,250,000
Missoula County Sunset West	291,000
Philipsburg	200,000
Plentywood	577,000
Seeley Lake	1,340,000
Twin Bridges	300,000
Virginia City	66,000
Whitefish #1	400,000
Whitefish #2	<u>5,839,000</u>
TOTAL	\$31,887,000

Proposed Loans—FY 2001	Amount
Cut Bank #2	\$2,304,000
Fort Peck	1,520,000
Great Falls	3,000,000
Helena	1,250,000
Missoula Fairgrounds	200,000
Superior	<u>3,000,000</u>
TOTAL	\$11,274,000

Resource Development Bureau

The Resource Development Bureau (RDB) administers several grant and loan programs and provides assistance to conservation districts for the administration of water reservations. The programs include:

- Reclamation and Development Grants Program
- Renewable Resource Grant and Loan Program
 - Public Grants
 - Project Planning Grants
 - Emergency Grants
 - Private Grants
 - Private Loans
 - Public Loans
- Treasure State Endowment Loan Program
- Conservation District Water Reservations
- Irrigation Development Program

FY 2000 was a successful year for these programs. Over 300 contracts were being actively administered, and approximately \$7 million in grant and loan funds was disbursed for projects throughout the state.

Reclamation and Development Grants Program

The Reclamation and Development Grants Program (RDGP) is a state-funded grant program designed to fund projects that “indemnify the people of the state for the effects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the citizens of Montana” (MCA 90-2-1102). The program was established in 1987. Any department, agency, board, commission, or other division of state government or any city, town, county, or other political subdivision or tribal government within the state may apply for a RDGP grant.

The funding source for this program is interest income from the RIT Trust fund and mineral taxes. Grants of up to \$300,000 are available per application, and a total of \$3 million in grant funds is available each biennium.

Reauthorization of funds not used in prior bienniums, plus the statutory appropriation of \$3 million for this biennium, enabled the 1999 Legislature to approve 16 projects totaling \$3,233,197 (see Table 9). Agreements for eight of these have been executed, bringing the total number of active grants being administered to 35. The allocation is illustrated in Figure 7.

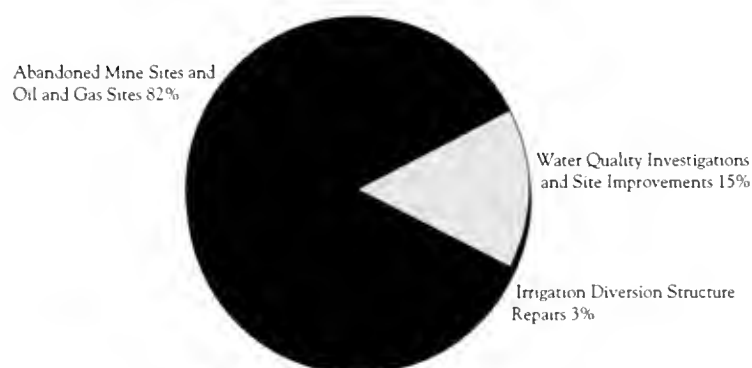
One example of an RDGP project is the Development of Acid/Heavy Metal-Tolerant Cultivars Project, which was initiated in 1995 with a two-year grant awarded to Deer Lodge Valley Conservation District. In 1998, this grant was renewed for an additional two years. The project is being conducted at the U.S. Natural Resources Conservation Service's Bridger Plant Materials Center (BPMC) located 45 miles south of Billings.

The goal is to release selected native plants for use on acidic, metalliferous sites common at the 10,000 abandoned mine sites in Montana. Currently, there are no

Table 9
Reclamation and Development Grants Approved by the 1999 Legislature
(in Order of Their Ranking)

Recipient	Project Name	Grant Amount
Montana Board of Oil and Gas Conservation	1999 "A" Orphaned Well Plug and Abandonment, and Site Restoration	\$300,000
Montana Board of Oil and Gas Conservation	1999 "B" Orphaned Well Plug and Abandonment, and Site Restoration	300,000
Montana Department of Environmental Quality	Toston Smelter Reclamation Project	300,000
Montana Department of Environmental Quality	Frohner Mine Reclamation Project	300,000
Montana Department of Environmental Quality	Great Republic Smelter Reclamation Project	300,000
Park Conservation District	Upper Yellowstone River Cumulative Effects Investigation	299,940
Toole County	Plugging and Abandonment, Aid to Independent Small Oil Operators	300,000
Butte-Silver Bow Local Government	Upper Clark Fork Basin: Superfund Technical Assistance	95,236
Fergus County Conservation District	Central Montana Artesian Basin Groundwater Project	150,000
Toole County	North Toole County Reclamation Project	150,000
Butte-Silver Bow Local Government	Mining City Mineyard Preservation and Enhancement	297,104
Townsend, City of	East Pacific Mine Reclamation	202,500
Montana Tech of the University of Montana	Champion International Gravel Pit Reclamation Project	57,494
Lewistown, City of	Big Spring Creek Drainage Source Location of Hazardous Organic Contaminants	50,000
Glasgow Irrigation District	St. Mary Diversion Repairs	110,818
Montana Board of Oil and Gas Conservation	Oil Well Abandonment	20,105
	TOTAL	\$3,233,197

**Figure 7. Legislative Allocation of Funds for
Approved Reclamation and Development Grant Projects**



acid/metalliferous-tolerant releases on the market. The testing and subsequent release of superior ecotypes will aid reclamationists in the re-establishment of a diverse plant ecosystem on affected lands.

In the 1995-97 grant period, 95 species consisting of 51 grass, 29 forbs, and 5 shrub species were planted on the Anaconda Smelter Superfund Site in southwestern Montana. After three growing seasons, the superior performing accessions were identified.

During the 1998-2000 grant period, the project focused on large-scale seed collection of the superior performing accessions. These 13 grasses, 6 forbs, and 7 shrubs are being grown at BPMC to determine cultural techniques and to increase the amount of seed. Releases are anticipated to start in 2001. Foundation quality seed for the releases will be maintained at BPMC for distribution through the Montana and Wyoming Crop Improvement Associations to commercial seed producers.

Funding for the project beyond the current grant period will come from the U.S. Environmental Protection Agency. Supplemental funding may be available from the Natural Resource Damage Program's Upper Clark Fork River Basin Restoration Fund Grant Program. The project will focus on field testing, release of plant material, and maintenance of foundation quality seed in the forthcoming four-year grant period. The success of this project has also resulted in additional funding by the Atlantic Richfield Company.

In May of FY 2000, RDGP received 30 applications for \$7.6 million in grants. The RDGP staff is now evaluating those applications and will make recommendations to the 2001 Legislature. Projects approved by the legislature will receive funding.

Renewable Resource Grant and Loan Program

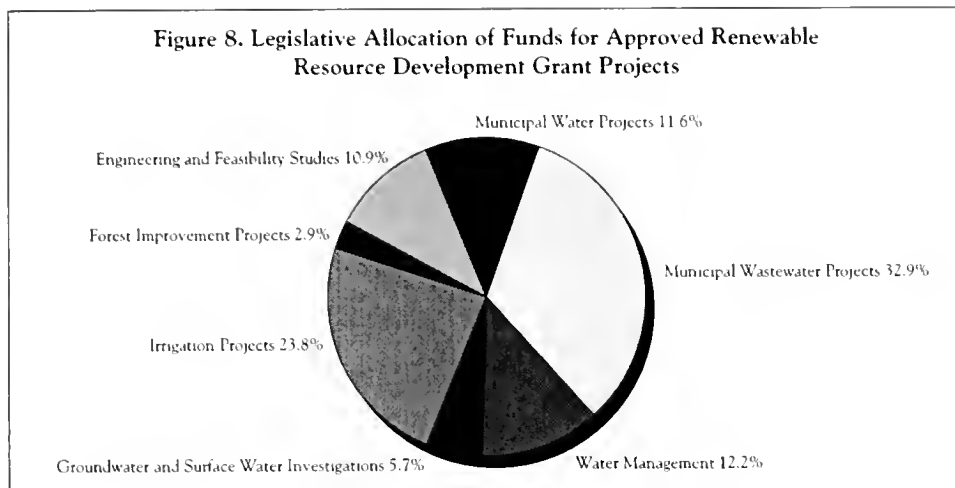
The Montana Legislature established what is now called the Renewable Resource Grant and Loan Program (RRGLP) in 1975 to promote the development of renewable natural resources. Funding from the RIT interest and the mineral tax is available to research, plan, design, construct, or rehabilitate projects that conserve, develop, manage, and/or preserve Montana's renewable resources. RRGLP funds a variety of natural resource projects including groundwater studies, irrigation rehabilitation, water and soil conservation, municipal drinking water improvements, public wastewater, and forest enhancement.

A total of \$3.5 million is available over the biennium for grants to public entities for renewable resource projects. An additional \$400,000 is available for grants to assist public entities in the planning and design of projects eligible for funding under RRGLP, and \$100,000 is available for private grants. The loan program is funded through the issuance of general obligation and coal severance tax bonds. These private loans are primarily for irrigation projects.

Public Grants

Up to \$100,000 is available per grant application. The allocation of funding for the 49 projects approved by the 56th Montana Legislature is illustrated in Figure 8. Table 10 lists the projects in the order in which they are ranked.

Figure 8. Legislative Allocation of Funds for Approved Renewable Resource Development Grant Projects



In FY 2000, a total of 116 renewable resource grant contracts were administered by the bureau, and \$1,149,150 was disbursed.

In May 2000, the department received 71 applications requesting \$3 million in loans and \$6.9 million in grant funds. These grant and loan applications request funding for FY 2002 and FY 2003. The RRGLP staff is currently evaluating these applications and will make recommendations to the 2001 Legislature.

An example of a renewable resource grant project is the Costitch Dam Rehabilitation Project sponsored by Glen Lake Irrigation District in Eureka. The project was funded by a \$100,000 grant authorized by the 1999 Legislature. Costitch Dam, a small, earthfilled dam located one mile west of Eureka, is a high hazard dam that provides water storage for late-season irrigation in the Tobacco Valley. The outlet works including the primary spillway, headgate structure, and outlet pipe were deteriorated to the point that water was leaking into the core and toe of the dam, thus weakening the structure and creating the potential for a breach. Improvements to the dam included removal of the existing headgate and outlet pipe; construction of a cast-in-place concrete spillway, gate structure, and metal walkway; replacement of the outlet pipe; placement of riprap on the upstream face of the dam to prevent erosion; and installation of a toe drain to relieve pressures within the dam. The project was completed in the spring of 2000 prior to the irrigation season.

Project Planning Grants

The project planning grants funded in FY 2000 provide up to \$10,000 on a 50 percent cost share to public entities for the completion of preliminary engineering, design, and feasibility analysis. This new part of the program has been very successful. All but \$53,294 of the \$400,000 available has been obligated. Table 11 presents a list of these grants.

Table 10
Renewable Resource Grant and Loan Program Projects
Funded by the 1999 Legislature

Rank	Applicant	Project Name	Grant Funding	Loan Funding	Total Project Cost ¹
1	Glasgow Irrigation District	Saint Mary Siphon Repair	\$100,000		\$133,000
2	Malta Irrigation District	Repair and Modification of Dodson Diversion Dam	100,000	\$2,274,950	2,374,950
3	Cascade County Conservation District	Muddy Creek Restoration and Water Quality Improvement	77,000		208,220
4	Madison County	Harrison Wastewater System Improvements	100,000		1,600,000
5	Glasgow Irrigation District	Phase I- Vandalia Diversion Dam Rehabilitation	56,000		66,000
6	Petroleum County Conservation District	Musselshell River Assessment and Monitoring Plan	50,150		94,150
7	Montana Department of Natural Resources and Conservation	Deadman's Basin Water Quality Improvement	75,000	434,700	609,700
8	Tin Cup County Water and Sewer District	Tin Cup Lake Dam Restoration Project	25,000		422,800
9	Fort Shaw Irrigation District	Water Quality and Quantity Improvement	50,000		212,090
10	Sheridan County Conservation District	Sheridan County Groundwater Management Program	99,700		231,750
11	Cut Bank, City of	Water System Improvements	100,000		3,234,250
12	Buffalo Rapids Project	Improving Pump Discharge Line Efficiency	91,622		193,135
13	Montana Department of Natural Resources and Conservation	Seepage Monitoring Program	100,000		134,290
14	Sanders County	Floodplain Delineation of the Clark Fork River	100,000		110,670
15	Missoula, City of	Sewer System-East Reserve Street Phases II and III	100,000		5,215,107
16	Glen Lake Irrigation District	Costich Dam Improvement Project	100,000		113,976
17	Denton, Town of	Wastewater Treatment Project	100,000		943,400
18	Bitterroot Irrigation District	Water Conservation and Improvement	99,650		322,750
19	Frenchtown Irrigation District	Irrigation System Water Use and Water Quality Improvements	32,900		106,090
20	Boulder, Town of	Water System Improvement	100,000	907,000	1,927,000
21	Daly Ditches Irrigation District	Republican Canal Diversion Dam Replacement	100,000	730,691	878,786
22	West Crane Irrigation District	West Crane Sprinkler Irrigation Project	100,000		376,757
23	Hebgen Basin/West Yellowstone Refuse District	Composting Facility for Municipal Solid Waste	99,425	2,080,000	2,338,483
24	Teton County Conservation District	Irrigation Methods and Pesticide Transport to Groundwater	100,000		160,361
25	Glasgow, City of	Combined Sewer Separation Project	100,000		1,600,000
26	Columbia Falls, City of	Sewer Treatment Plant Upgrade	100,000		3,577,000
27	Sweetgrass County Water/Sewer District	Wastewater Treatment Facility Rehabilitation/Upgrade	100,000		631,000

1. The total project cost usually includes funds from other sources, in addition to RRGLP grants and loans.

Continued on page 41

Table 10
Renewable Resource Grant and Loan Program Projects
Funded by the 1999 Legislature
(Continued from page 40)

Rank	Applicant	Project Name	Grant Funding	Loan Funding	Total Project Cost ¹
28	Sheridan, Town of	Water Supply Improvements	\$ 30,000		\$ 40,400
29	Corvallis County Sewer District	Upgrade and Expansion of Wastewater Treatment Facility	100,000		816,520
30	Geraldine, Town of	Wastewater Improvements	50,000		811,007
31	Roosevelt County Conservation District	Fort Peck Assiniboine and Sioux Rural Water Supply Project	82,109		242,109
32	Brockton, Town of	Water and Wastewater System Improvements	100,000		1,020,250
33	Neihart, Town of	Water Distribution Improvements	76,770		101,720
34	Lewis and Clark County Water Quality Protection District	Helena Area Groundwater Quality Monitoring Network	100,000		125,773
35	Eureka, Town of	Wastewater Collection, Treatment, and Disposal Improvements	100,000		1,380,000
36	Ekalaka, Town of	Ekalaka Water Source Improvement	100,000		115,000
37	Garfield County Conservation District	Rehabilitation of Irrigation Diversion Dam and Outlet Works	100,000		110,500
38	Drummond, Town of	Sanitary Sewer Rehabilitation Project	100,000		585,700
39	Lake County Conservation District	Forestry Implementation Project	100,000		248,001
40	Rae Water and Sewer District	Wastewater Treatment System Improvements	100,000		971,700
Funding for projects below this line will depend on the availability of revenue.					
41	Canyon Creek Irrigation District	Canyon Lake and Wyant Lake Restoration Project	\$100,000	\$227,000	\$402,000
42	Chinook Division Irrigation Association	Rehabilitation and Betterment of Water Conveyance Systems	100,000		137,590
43	Montana Department of Natural Resources and Conservation	Missouri Pipe Span Rehabilitation Project	100,000		509,426
44	Big Timber, City of	Lagoon Reconstruction and Lining	100,000		1,796,275
45	LaCasa Grande Estates Water and Sewer District	New Water Supply System	100,000		1,045,000
46	Missoula, City of	Rattlesnake Creek Floodplain Restoration and Control	74,000		88,000
47	Eureka, Town of	Water System Facility Plan	25,000		35,000
48	Havre, City of	Source-Water Delineation for Havre and Seeley Lake	20,000		141,120
49	Troy, City of	Water System Master Plan	23,646		30,000

1. The total project cost usually includes funds from other sources, in addition to RRGLP grants and loans.

Table 11
Project Planning Grants

Ashland Water and Sewer District	\$ 6,500
Butte–Silver Bow Public Works	10,000
Canyon Creek Irrigation District	10,000
Cascade County CD	10,000
Choteau, City of	10,000
Chouteau County CD	10,000
Clyde Park, Town of	10,000
Darby, Town of	8,075
Elk Meadow Ranchettes (Missoula County)	3,950
Florence Water and Sewer District (Missoula County)	6,325
Glen Lake Irrigation District (Lincoln County)	10,000
Hobson, Town of	5,000
Jordan, Town of	8,750
Judith Basin County	10,000
Kevin, Town of	8,980
Laurel, City of	10,000
Lavina, Town of	9,000
Lewis and Clark CD	10,000
Libby, City of, #1	10,000
Libby, City of, #2	10,000
Livingston, City of	10,000
Lockwood Water and Sewer District (Yellowstone County)	9,187
Madison CD	9,924
Madison County	10,000
Manhattan, Town of	10,000
Missoula, City of	10,000
Missoula County	7,500
Missoula County CD	7,500
Montana Department of Fish, Wildlife and Parks—Lost Creek	10,000
Montana Department of Fish, Wildlife and Parks—Rock Creek	10,000
Park County—Cooke City	10,000
Phillips County—Zortman Water and Sewer District	10,000
Polson, City of	10,000
Rexford, Town of	3,675
Richey, Town of	2,500
South Hills Water and Sewer District (Yellowstone County)	4,850
Troy, City of	10,000
Whitefish, City of, #1	10,000
Whitefish, City of, #2	4,990
Wolf Point, City of	10,000
TOTAL	\$ 346,706

Emergency Grants

In addition to the grants authorized by the legislature, the department has authority to provide \$125,000 in emergency grants to governmental entities if delaying the project until legislative approval can be given would cause loss of property or create legal liability. In FY 2000, DNRC made only one emergency grant. Four other requests for emergency grants were denied because they failed to meet the requirements that have been established either statutorily or by DNRC that qualify a project for emergency grant funding through this program.

In December 1999, Valley View School District in Lake County requested emergency funding to drill a new well. The rural school, located 9 miles south of Polson, had experienced a complete failure of its 500-foot deep well and was being forced to purchase bottled water for drinking purposes and non-potable water to fill a cistern for sanitary purposes. The district had few reserves, and a \$30,000 grant was authorized by the department to drill a new well and make improvements to the salvaged submersible pump that had been in the collapsed well. The new well was completed in April 2000.

Private Grants

Financial assistance is available to any individual, association, partnership, or corporation (both for-profit and nonprofit). The legislature allocated \$100,000 for private grants. By law, grant funding for a single project may not exceed 25 percent of the total estimated cost.

Most of the funds are targeted to assist small, privately owned water systems. Owners of small systems have difficulty in meeting Safe Drinking Water Act regulations, but must meet the same requirements that municipal water systems face. The department has identified 79 private water systems for potential funding. The average size of a grant is just over \$2,730; the grant must be matched on a 3-to-1 basis. DNRC awarded seven grants totaling \$23,420 in FY 2000.

Private Loans

Loans for private water development projects are available from the department. Loans to individual private entities may not exceed the lesser of \$200,000 or 80 percent of the fair market value of the security given for the project. Private loans to individuals must be secured with real property. Loans up to \$300,000 are available for such organizations as water user associations and ditch companies. These loans are scored by the revenue produced by the system. Irrigation system improvements — for example, the conversion from flood irrigation to sprinkler irrigation — are the most common type of projects funded through private loans.

To finance loans, the law provided authority to issue general obligation renewable resource bonds up to a total outstanding balance of \$20 million. The current outstanding balance on the loans is \$9.64 million. In FY 2000, 124 loans were being administered, and DNRC closed 16 new loans totaling \$1,784,255.

In FY 2000, the Private Loan Program sold \$3.25 million in bonds to the Water Pollution Control State Revolving Fund. The interest rate on these bonds is 4 percent, which is 2 to 3 percent below traditional market rates for these bonds. Adding a 0.3 percent charge for a loan loss reserve, DNRC is able to offer potential

borrowers a 4.3 percent loan for irrigation improvement projects. The lower interest rate has increased demand for the loan program significantly. This coordinated effort between the two loan programs also allowed DNRC to refinance seven private loans, reducing the interest rates from over 8 percent to 5.25 percent. All loans must qualify as “non-point pollution control projects.” Because the program funds irrigation improvement projects, primarily, all of the new loan requests have qualified for these low interest funds.

Public Loans

This program makes loans to communities for renewable resource projects. The program was started in 1981 by the Montana Legislature, which granted a total of \$250 million in coal tax bonding authority. In FY 2000, 72 public loans with a balance of approximately \$49.3 million were outstanding. The public loans are listed in Table 12. The legislature has approved \$20 million in loans for which funds have not yet been drawn.

The Renewable Resource Public Loan Program has been evolving into a new role over the last decade. Prior to 1990, the Public Loan Program was one of the few low cost sources of public loan funds that municipalities had available. Many of the early loans in the Public Loan Program were for municipal water and wastewater projects. However, since the creation of the Water Pollution Control and Drinking Water State Revolving Fund (SRF) Loan Programs, municipalities are borrowing funds at 4 percent from the SRF programs. This has freed capacity in the Public Loan Program for other types of projects. In fact, there has been a steady increase in the number of irrigation loans that the program has funded, which reflects the need for repair of aging ditches, diversions, and other irrigation infrastructure as well as the lack of any federal assistance for these projects. The Public Loan Program also provides a safety net for municipal projects, such as solid waste projects, that may not qualify for SRF funding.

Table 12
Public Loans

Applicant	Balance Due	Applicant	Balance Due
Anaconda – Deer Lodge County	\$230,493	Lakeside County Water and Sewer	\$181,463
Antelope	63,710	Libby	222,559
Beaverhead County/Red Rock	2,050,693	Lima	145,569
Water and Sewer		Lockwood Irrigation District	136,139
Belgrade	341,395	Miles City	1,043,601
Bitterroot Irrigation District	757,146	Mill Creek Water and Sewer District	688,489
Bozeman #1	253,299	Neihart	133,042
Bozeman #2	453,360	Park County	79,108
Broadwater Power Project #1	21,735,000	Pondera County Canal and Reservoir #1	360,298
Broadwater Power Project #2	970,000	Pondera County Canal and Reservoir #2	291,914
Charlo Water District	14,391	Poplar	211,520
Conrad	102,485	Sage Creek Water District	527,927
Culbertson #1	245,762	Sanders County Water District at Noxon	100,931
Culbertson #2	39,440	Shelby	223,387
Cut Bank – North Glacier	58,357	Shields Canal Water Users Association	16,680
Water and Sewer District		State Water Projects Bureau, DNRC—	850,000
Denton	107,849	East Fork Rock Creek Dam	
Dutton #1	110,999	State Water Projects Bureau, DNRC—	509,426
Dutton #2	19,857	Missouri Pipespan	
East Bench Irrigation District	514,601	State Water Projects Bureau, DNRC—	322,201
East Helena	263,236	Petrolia Dam	
Ekalaka	101,052	State Water Projects Bureau, DNRC—	88,850
Ennis #1	67,922	Upper Musselshell Water Users Association	
Ennis #2	642,541	State Water Projects Bureau, DNRC—	13,241
Fairview	188,353	Yellowwater Water Users Association	
Flathead County for Evergreen	2,935,105	Sun Prairie Sewer District	390,816
Forsyth #1	309,286	Sun Prairie Water and Sewer District	158,252
Forsyth #2	267,260	Three Forks #1	128,457
Fort Benton #1	333,323	Three Forks #2	84,001
Fort Benton #2	482,200	Tin Cup Water and Sewer District	279,055
Gardiner – Park County Water District	225,826	West Yellowstone #1	273,405
Glasgow	1,689,709	West Yellowstone #2	359,119
Glendive	1,198,184	White Sulphur Springs	220,423
Harlem	234,614	Whitefish	381,835
Havre	1,148,476	Whitehall	39,866
Huntley Irrigation District #1	1,224,447	Wibaux	185,955
Huntley Irrigation District #2	293,215	Winnett	32,333
Hysham	181,508	Yellowstone County #1	116,027
Kevin	85,472	Yellowstone County #2	149,211
Lakeside County Sewer District	429,788		
		TOTAL	\$49,315,454

Treasure State Endowment Program Loans

The Treasure State Endowment Program (TSEP) is administered by the Montana Department of Commerce. However, if a loan is recommended by the Department of Commerce and authorized by the legislature, DNRC is responsible for closing and administering the loan. This relationship was developed because of the loan expertise and financial management system that DNRC has developed over the last 15 years in administering the Renewable Resource Grant and Loan Program.

The department helped four local governments find alternative financing for the \$1.9 million in TSEP loans previously authorized by the legislature. For the most part, these communities have received funding at a lower interest rate through the SRF programs. In May, the Department of Commerce received one new loan application for a bridge project in Cascade County. The Commerce Department's staff is currently reviewing the proposal under the TSEP criteria and will be consulting with DNRC during FY 2001 concerning financing.

Conservation District Water Reservations

In 1978, the Board of Natural Resources and Conservation granted water reservations to 14 conservation districts (CDs) in the Yellowstone River basin. Nine CDs were granted reservations in the upper Missouri River basin in 1992, and eleven CDs were given reservations in the lower and Little Missouri River basins in 1994. Some CDs have reservations in more than one basin. The Resource Development Bureau provides legal, technical, and programmatic assistance to conservation districts in administering water reservations.

At the end of the 1999 irrigation season, there were a total of 153 CD water reservation projects in the Yellowstone River basin. These projects put to use 51,538 acre-feet of water, which is 12 percent of the CDs' total allocated water.

Thirty-four reserved water use authorizations had been issued by CDs in the Missouri River basin by the end of the 1999 irrigation season. These projects have developed 17,371 acre-feet of water, which is 5.7 percent of the CDs' allocated water.

Fiscal Year 2000 sparked new enthusiasm for use of the CD-reserved waters. The Vision 2005 initiative, organized by the Montana Department of Agriculture, has brought focus on the agricultural economy and, specifically, the role of irrigation development to provide water to high value crops. The water reservations held by conservation districts are development rights that are key to this effort. As a result, the department is assisting in marketing the water reservations and making sure that individuals interested in irrigation development are aware of the districts' role.

Irrigation Development Program

The Vision 2005 Task Force organized by the Montana Department of Agriculture set a goal to double the value of agriculture in Montana by the year 2005. One of the key components of this vision was to develop 500,000 acres of new irrigation projects that would grow high value crops such as potatoes and sugar beets. The 1999 Legislature established the Irrigation Development Program to accomplish this goal.

In FY 2000, program staff worked with groups throughout eastern Montana to pursue the development of new projects and find ways to increase the value of existing irrigation. Irrigation development projects have involved high lifts, drilling new wells, and building dams large enough to hold water for irrigation sprinklers. Approximately 16 irrigation projects are ongoing, with small groups of producers risking their time, energy, and money to see whether there is an opportunity to increase the value of their farms. Dryland farmers are starting to convert to sprinkler irrigation for high value crops, and experienced irrigators are increasing their efficiencies by converting flood to sprinkler irrigation. Potato growers have been looking for more acres.

Not only is irrigation being developed for high value crops, it is also an alternative for ranchers who would like to have pasture all summer for their herds. With an intensive grazing rotation under these irrigation pivots, ranchers can rest their rangeland and improve utilization of the grasses.

Most of the new and improved irrigation systems show feasibility and will develop into profitable operations. Table 13 has the list of grants approved in FY 2000. There was \$150,000 available for grants.

Table 13
Irrigation Development Grants Issued in FY 2000

Grant Recipient	Project	Amount
Fort Peck Tribes	Socioeconomic study of Sprole Irrigation Project	\$25,000
Glendive Area Chamber of Commerce	Tour of new irrigation and alternative crops	925
Lower Yellowstone Conservation Districts Development Council	Pick-Sloan irrigation power policy and search	22,030
Miles City Area Economic Development Council	Tour of new irrigation and alternative crops	4,900
Natural Resources Information Service	Contract services to help build layers for GIS database for program	5,000
Roosevelt County Conservation District	Agronomist for Sprole Irrigation Project and alternative crops	36,300
Victory Irrigation District	Study of the rehabilitation and addition of up to 1,000 acres of new irrigation	15,000
West Crane Irrigation Project	Consultant work to complete 310 and 404 permits and other projects	<u>30,000</u>
TOTAL		\$139,155

FORESTRY DIVISION



FORESTRY DIVISION

Protecting Montana's natural resources from wildland fires through regulation and partnerships with federal, state, and local agencies, and helping Montanans achieve land stewardship and compliance with state forestry laws.

The Forestry Division, headquartered in Missoula, is responsible for planning and implementing forestry programs through a network of field offices located across the state. The forestry program has two major functions: fire and aviation management, and service forestry. Each function is further broken down into programs and subprograms, most with statewide application. The Forestry Division has the following goals:

- Protecting the state's natural resources from wildfire, insect pests, and disease
- Sustaining or improving the natural resources of private forestland for the good of all Montanans
- Promoting and supporting conservation practices on all lands in Montana
- Enforcing the state's forest practices laws in a manner that is both fair and consistent to all parties, and that complies with the intent of the legislation
- Encouraging the maintenance, planting, and management of trees and shrubs in Montana communities

Fire and Aviation Management

As charged by state law, DNRC protects the natural resources of the state from fire and is responsible for fire protection on all forestlands within this state that are officially classified by the department as forestlands.

Protection

DNRC's Fire and Aviation Management Bureau is a team of trained professionals providing wildland fire service leadership to Montana, commissioned by Montana citizens to protect the natural resources of the state by preventing and suppressing wildland fires, and accountable to Montana citizens. Presently, all wildlands in Montana have some form of fire protection. DNRC protects natural resources on state and private lands through aggressive fire prevention and protection activities. A total of 52,196,373 acres of state-owned and private lands are protected as detailed in state resource management plans, or as required by law (see Table 14). The Fire and Aviation Program staffs 65 engine (and water tender) companies and 5 helicopters to provide direct protection of 5.1 million acres. The program also loans over 350 engines and water tenders to local fire agencies, primarily in the eastern part of the state. DNRC has been given the responsibility to coordinate all contract responses of fire department resources that cross county lines.

Direct Protection

DNRC provides direct protection to a total of 5,115,345 acres consisting of 3,500,190 acres of state and private land; 685,011 acres of U. S. Bureau of Land Management (BLM) lands; 5,877 acres of Tribal/U.S. Bureau of Indian Affairs (BIA) lands; 18,117 acres of U.S. Fish and Wildlife Service (FWS) lands; 2,776 acres of Bureau of Reclamation (USBR) lands; and 903,374 acres of U. S. Forest Service (USFS) lands. Privately owned forested lands within the boundaries of an incorporated city are included. Priority is given to the protection of forested lands owned by the state.

State/County Cooperative Fire Protection

Under the State/County Cooperative Fire Protection Program, the department has secondary protection responsibility for 45,309,480 acres of state-owned and privately owned non-forested lands. These lands are predominantly found in eastern Montana. A network of 400 fire departments provides initial response to wild-fires. DNRC assists on fires that escape the counties' capabilities.

Contracted Federal Protection

Fire protection of a total of 1,771,548 acres of state and private lands are subcontracted to federal agencies.

Table 14
Fire Protection by DNRC in FY 2000

Total Acres	Category	State and Private Lands (Acres)	Public Lands (Acres)
5,115,345	DNRC Direct Protection State and Private Lands BLM Lands USFS Lands Tribal/BIA Lands USBR Lands FWS Lands	3,500,190	685,011 903,374 5,877 2,776 18,117
1,771,548	Federal Direct Protection ¹ Protected by BIA (Tribal) Protected by BLM Protected by USFS Protected by FWS	150,835 85,629 1,498,214 36,870	
45,309,480	State/County Cooperative Fire Protection ²	45,309,480	
52,196,373	TOTALS	50,581,218	1,615,155

1. Subcontracted to federal agencies

2. Includes all 56 counties

Fire Prevention

The Fire Prevention Program's purpose is to reduce the number and severity of wildfires occurring each year. The program is made up of three parts:

- Engineering through prescribed fire and application of DNRC's wildland/residential interface development guidelines
- Education
- Engineering and compliance measures applied to avert wildfire damage on lands protected by DNRC and cooperating counties

Wildland/residential interface areas are emphasized, and information is provided to local officials so that they can make informed decisions regarding local planning and development issues.

DNRC has completed its fire risk rating on 95 percent of the direct protection areas that are high risk. Several hundred plats of proposed developments are being evaluated, and recommendations are being submitted to county commissions regarding conditions for fire-safe developments. The Fire Protection Guidelines for Wildland/Residential Interface Development continue to be of high interest to many county organizations. The guidelines continue to be applied to existing and proposed developments throughout the state.

Major issues in FY 2000 included implementation of both the new Federal Fire Policy and the new Six-Party Master Fire Agreement with the federal fire agencies. These efforts will continue in FY 2001.

Fire Suppression

Through the Fire Suppression Program, DNRC directly protects 5,115,345 acres of state, private, and federal lands; assists all 56 cooperating counties with fires exceeding their capabilities on 45,309,480 acres of state and private lands; and sub-contracts fire protection on 1,771,548 acres of state and private lands to the U.S. Forest Service, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Bureau of Indian Affairs (Tribal). DNRC also provides support and assistance to federal fire agencies and other states when appropriate.

The number of fires that occurred during the calendar year 1999 fire season was above the five-year average; 467 fire incidents that burned a total of 87,356 acres were reported (see Figures 9 and 10). The average number of fires over the last five years is 346 per year, and the average number of acres burned over each of the last five years is 50,413. The annual acreage burned varied from 3,420 acres in 1997 to 119,536 acres in 1996.

Figure 9
Number of Fires on State-Protected Land

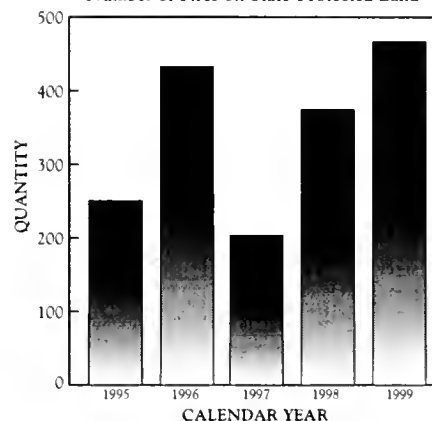


Figure 10
Acres Burned on State-Protected Land

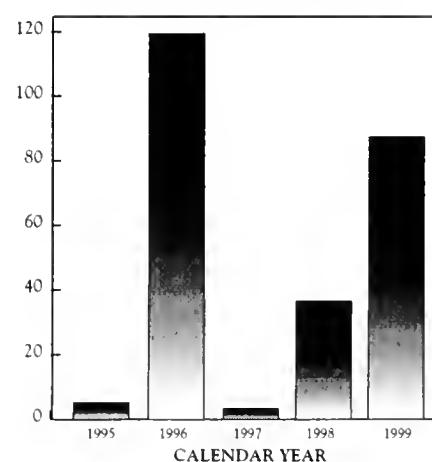
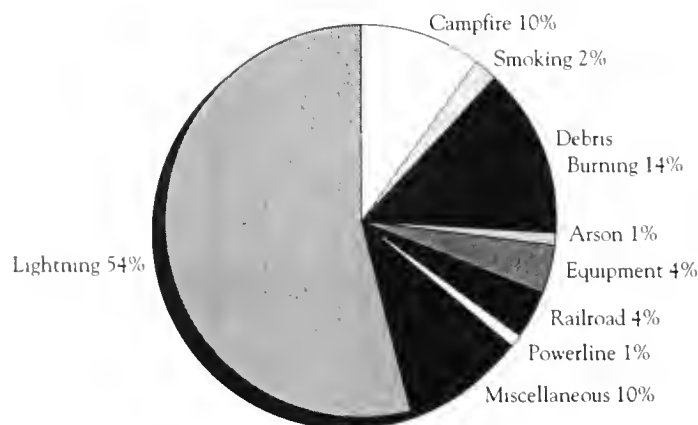


Figure 11
Percentage of Fires, by Cause
 (5-Year Average)



Lightning is the single most frequent cause, starting 54 percent of the fires, with debris burning being the next most frequent, causing 14 percent (see Figure 11). DNRC contains an average of 94 percent of the fires at under 10 acres in size.

DNRC also provided support to Disaster and Emergency Services on a few nonfire incidents in FY 2000. These incidents involved law enforcement and a threat of flooding from potential dam failure.

Fire Training

The Fire and Aviation Management Bureau provides training in fire prevention, detection, investigation, suppression, aviation, communications, safety, prescribed fire, participation on incident management teams, and wildland fire training instruction.

Ninety-eight courses of wildland fire training were presented to 1,835 volunteer and career firefighters in Montana's 56 counties through the County/State Cooperative Fire Protection Program and to DNRC's seasonal firefighters and support personnel for fire protection responsibilities on over 5 million acres of forestlands under direct DNRC protection. DNRC is actively involved in the development of overhead, or management, personnel within the agency and in cooperating wildland fire agencies, in local communities, statewide, and at the regional Northern Rockies Interagency Training Center in Missoula.

During FY 2000, DNRC also assisted Disaster and Emergency Services in providing all-risk or non-wildland fire incident management training.

Development and Support

Through its equipment development program, DNRC obtains federal excess property and develops it into fire suppression equipment and vehicles. This equipment is used primarily to support the State/County Cooperative Fire Protection Program. In FY 2000, DNRC obtained supplies, vehicles, and aircraft that have a total value of \$4,402,409 through the Federal Excess Property Program. The equipment acquired included a total of 31 vehicles and trailers.

The 18 individual development projects that were completed in FY 2000 are listed in Table 15.

Table 15
Development Projects in FY 2000

Type 6 (200-gallon) wildland engines	13
Type 5 (500-gallon) engine	1
Refrigerator truck	1
Helicopter fuel tenders (600-gallon)	2
Screening truck and trailer	1

Aviation

The Aviation Program operates and maintains a fleet of eight aircraft (three fixed-wing and five rotary wing). The fixed-wing aircraft, which are located in Kalispell, Missoula, and Helena, are used for fire patrol and personnel transportation. Three medium Huey helicopters are stationed in Kalispell, Missoula, and Helena for fire support and suppression work. Two light helicopters (Bell 206s) are stationed in Helena. One of these is owned by the Department of Environmental Quality (DEQ). DNRC pilots fly this helicopter on DEQ and DNRC missions. The second light helicopter is used for backup or additional coverage.

In FY 2000, the aircraft flew a total of 1,058 hours. Other program statistics are shown in Table 16.

Table 16
Aviation Program Accomplishments in FY 2000

Detection	317 hours
Initial attack	387 hours
Support missions	101 hours
Administrative	253 hours
Water delivered	633,088 gallons

Service Forestry Programs

DNRC's service forestry programs provide products and services to various client groups and individuals. The State Nursery grows seedlings for private conservation plantings and reforestation of state-owned lands. Education emphasizing the stewardship and care of forestlands is presented to private forest owners and resource professionals. Communities are assisted with the care and planting of their community forests. Montana's forest laws are upheld. Private forestland improvements are administered using federal cost-share funds. Forest health problems are identified and monitored statewide.

The Service Forestry Bureau interacts with other agencies in the region and throughout the West to represent Montana's interests on private forestland issues.

Montana Conservation Seedling Nursery

DNRC's nursery produces, sells, and distributes seedlings for conservation plantings such as reforestation, farmstead and field windbreaks, shelterbelts, wildlife habitat, living snow fences, stream bank stabilization, and other conservation uses. The nursery provided seedlings to the Conservation Reserve Program, Forest Stewardship Program, Wildlife Habitat Incentives Program, Pheasants Forever, and numerous other conservation programs.

In FY 2000 the nursery sold 712,230 conservation seedlings and 79,592 seedlings for reforestation of school trust lands, or a total of 791,822 seedlings, as itemized in Table 17. Production and sales since FY 1997 are shown in Figure 12. Seedling sales were down due to low seedling requests from the Trust Land Management Division and decreased contract seedling production.

The number of seedlings sold was down in FY 2000. Revenue generated from seedling sales, however, increased by 11.3 percent to \$272,142, due to increased conservation plantings on small properties (of 10 to 100 acres) and increased production of large container sizes (see Figure 13). Nursery operation costs were covered by seedling sales revenue.

Table 17
Nursery Sales from FY 1996 to FY 2001

Fiscal Year	Conservation Seedling Program				Trust Land Seedling Program			Total Nursery Production
	Seedling Production	Seedlings Delivered	Nursery Revenue	Seedling Expenditures	Seedling Requests	Seedlings Delivered	Seedling Expenditures	
1996	743,048	653,950	\$ 220,922	\$ 231,876	437,700	352,421	\$ 57,879	1,095,469
1997	599,925	511,150	\$ 202,448	\$ 204,245	65,759	65,759	\$ 49,436	671,434
1998	646,800	574,125	\$ 239,381	\$ 236,374	180,125	170,217	\$ 46,125	817,017
1999	903,800	857,750	\$ 244,000	\$ 244,000	127,565	130,326	\$ 39,000	1,034,126
2000	740,294	712,230	\$ 272,142	\$ 272,799	82,130	79,592	\$ 41,209	819,886
2001 est.	897,050	879,500	\$ 331,000		272,964			1,169,744

Figure 12
Conservation Seedlings
Production vs. Deliveries

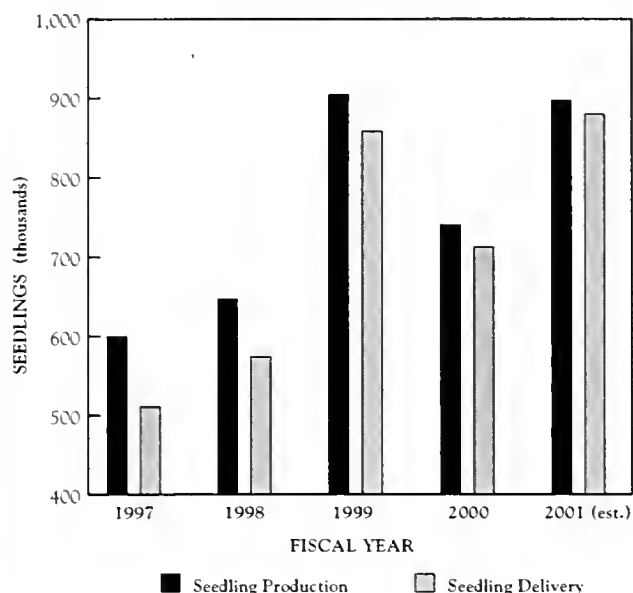
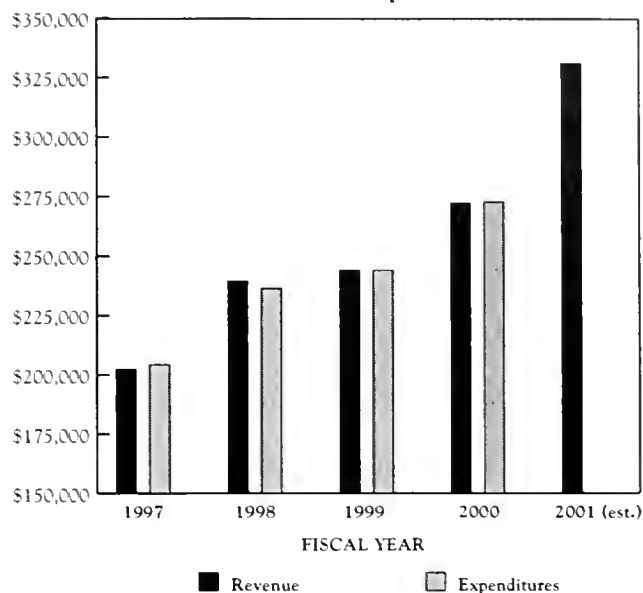


Figure 13
Conservation Seedlings
Revenue vs. Expenditures



Forest Pest Management

This program provides pest surveys, training, and technical services to help recognize and manage damaging insects and diseases in Montana's forests. These activities are done in cooperation with the U.S. Forest Service's Northern Region Forest Health Protection Group.

Western Montana showed a continued increase in Douglas-fir beetle, western pine beetle, and mountain pine beetle in lodgepole and ponderosa pine.

Defoliating insects active in the summer of 1999 included western spruce budworm and forest tent caterpillar. No visible Douglas-fir tussock moth defoliation was observed, and no gypsy moths were trapped in the state in 1999. Larch casebearer defoliation continued in the far western portion of Montana.

Various foliage needle blights and fungi caused defoliation to cottonwoods, willows, and aspen across the state. Ponderosa pine needle blight and lodgepole pine needle cast caused heavy local infections across western Montana.

Mortality and growth losses from root disease and dwarf mistletoes continued to be high throughout the state. Root-disease-caused mortality was more common west of the Continental Divide, and dwarf mistletoe caused approximately 33 million cubic feet of lost growth.

Some of the FY 2000 program accomplishments are listed in Table 18.

The program, along with USFS, also completed and distributed the annual *Montana Insect and Disease Conditions* report.

A mutual contract was developed by Montana and Idaho for forest pathology services, funded by a USFS grant. Work began on July 31, 2000.

Table 18
Forest Pest Management Activities in FY 2000

Technical assistance to private and industrial land managers	42 assists
Professionals trained in basic pest identification	3
Professionals trained in advanced pest management	21
Loggers and private landowners trained in pest identification and management	24
Pest samples identified and management treatments recommended	25
Aerial survey completed and sketch maps distributed to unit offices	3 million acres
DNRC timber sale analyses written	3

Forestry Assistance

The Forestry Assistance Program provides a range of services to private forest landowners and economic development organizations. By conveying forestry knowledge, this program helps Montanans perform forestry work that results in good land stewardship, a healthful environment, personal profit, and general economic growth.

In FY 2000, DNRC provided 870 forestry assists, including 124 timber sale assists. Many informational and educational assists result in actions taken on the ground by non-industrial forest landowners. During FY 2000, 87 follow-up actions were taken. Of the 87, 49 assists on 1,027 acres included such activities as insect and disease prevention, wildlife enhancement, forest range improvement, and reforestation. In FY 2000, production of 4,376 MBF resulted from 38 previous assists on 2,905 acres of non-industrial forestlands.

Service foresters provided 4,457 person days of education, the most notable of which were the Flathead Forestry Expo and the Streamside Management/Best Management Practices (BMP) workshops.

Although the Forest Stewardship Incentive Program is being phased out, 12 new practices were approved in FY 2000. The new practices included one planting and 11 thinning projects for a total of just over \$31,000, and the practices cover just under 250 acres. In addition, 26 practices on 397 acres were completed in FY 2000 for a total of \$33,161. The completed practices consisted of:

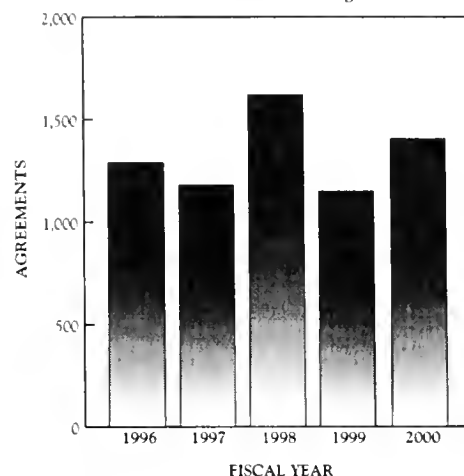
- Plantings 4
- Thinnings 18
- Soil and water protection or improvement 1
- Riparian and wetland protection and improvement 1
- Wildlife projects 2

Timber Slash

The Timber Slash Program implements state laws pertaining to control of timber slash and debris on private land to minimize wildfire hazards. The department carries out its responsibilities by entering into a bonded contract, called a Hazard Reduction Agreement (HRA), with the private party in charge of each cutting. The program handled 1,406 new HRAs in FY 2000 (see Figure 14), while another 1,262 HRAs were certified and closed. Those numbers are a 29 percent increase in new HRAs and a 15 percent decrease in closings, compared to FY 1999 levels, which can be attributed to the declining price of lumber.

In FY 2000, the Timber Slash Program collected \$168,580 in administrative fees. In addition, a total of \$65,410 was collected and distributed to Montana State University's Extension Forestry Program.

Figure 14
New Hazard Reduction Agreements



Forest Practices

The Forest Practices Program provides information and education about forestry BMPs to private persons, corporations, and other agencies. The program also includes standards for all forest practices conducted in streamside management zones (SMZs). The program helps people comply with voluntary and mandatory measures that protect soil and water resources during timber harvesting operations. In FY 2000, the services listed in Table 19 were provided.

Table 19
Forest Practices Activities in FY 2000

BMP pre-harvest informational packages mailed to landowners	1,406
On-site consultations	121
Post-harvest evaluations	42
Alternative practices issued	50
SMZ enforcement actions taken	27

In cooperation with the Montana Loggers Association, the program conducted seven SMZ/BMP field workshops for loggers. This year's workshops provided education and information to 185 individuals across the state.

Community Forestry

The goal of DNRC's Community Forestry Program is to have a viable program in every Montana community. DNRC's Community Forestry Program is funded by a U.S. Forest Service grant established under the 1990 Farm Bill. The program assists community leaders, volunteers, local governments, and the tree care industry with technical assistance, planning, funding for local programs, volunteer coordination, and education.

The program works closely with several major partners:

- U.S. Forest Service
- U.S. Natural Resources Conservation Service
- Montana Landscape and Nurserymen's Association
- Montana's Resource Conservation and Development Areas
- Governor's Office on Community Service
- Montana State University Extension Service
- Montana Community Forestry Council

Staff also participate in the Montana League of Cities and Towns, local tree and park boards, and volunteer organizations.

The Montana Community Forestry Program does not receive any state funding. Through partnerships, cost-shares, donations from special projects, and a \$179,500 federal grant, the program leverages more than \$700,000.

Major categories of assistance are shown in Table 20.

Table 20 Major Categories of Community Forestry Activities in FY 2000	
Communities with active programs	64
Montana "Tree City USAs" ¹	22
Communities receiving technical assistance	115
Technology transfer activities (workshops, presentations, conferences, training sessions)	364

1. "Tree City" is a national program through the Arbor Day Foundation.

Highlights of the Community Forestry Program for FY 2000 follow.

More than 300 trees were planted in 12 Montana communities as part of a carbon sequestration grant from the Montana Power Company, DNRC, USFS, and Headwaters RC&D. These trees will be monitored for their carbon sequestration and progress over the next several years. In addition to providing valuable boulevard and park trees in Anaconda, Butte, Deer Lodge, Drummond, Ennis, Garrison, Hall, Philipsburg, Sheridan, Twin Bridges, Virginia City, and Whitehall, this project will provide valuable scientific data pertinent to carbon sequestration in urban trees.

The Montana Tree Climbing Championship continues to be a great success for the program. This year's winner competed at the regional level, placing second. He also was selected to be a judge for the international competition. These achievements speak very well of the caliber of tree workers in Montana.

The Montana Community Forestry Council held its annual meeting in June and is exploring opportunities to work with new partners. Among them is the Montana Community Foundation, which can provide potential funding sources and assis-

tance with managing grants and endowments that the council may pursue in the future. This council also decided to interact more regularly, with the intention of holding quarterly meetings.

The Montana Community Forestry Program will participate in the Governor's Conference on Civic Responsibility in the fall of 2000. The conference will focus on engaging volunteers, community leaders, and citizens in active community service.

OIL AND GAS CONSERVATION DIVISION



OIL AND GAS CONSERVATION DIVISION

Prevent waste and provide for the conservation of crude oil and natural gas through regulation of exploration and production.

The quasi-judicial Board of Oil and Gas Conservation (BOGC) and its technical and administrative staff in the Oil and Gas Conservation Division are attached to the Department of Natural Resources and Conservation for administrative purposes. The board consists of seven members appointed to four-year terms by the governor. Members of BOGC during the period covered by this report are:

David Ballard, Chair Billings Petroleum Geologist and Geophysicist	
Denzil Young, Vice Chair Baker Attorney	Allen Kolstad Ledger Farmer
George Galuska Billings Petroleum Geologist	Stanley Lund Reserve Rancher
Jack King Billings Landman	Elaine Mitchell Cut Bank Accountant

The board's primary responsibilities are conservation of resources and prevention of waste through regulation of oil and gas exploration and production. In regulating these activities, the board relies heavily on its Oil and Gas Conservation Division staff. The division is headquartered in Billings, with field inspectors in Glendive, Plentywood, Roundup, and Shelby, and an administrative office in Helena.

The board's regulatory actions have four primary goals:

- Prevention of waste of oil and gas reserves
- Conservation of oil and gas through encouragement of maximum efficient recovery of those resources
- Protection of the correlative rights of the mineral owners, i.e., the right of each owner to recover its fair share of the oil and gas underlying its lands
- Prevention of harm to nearby surface or underground resources from oil and gas operations

It accomplishes these goals by issuing orders and deficiency reports, adopting rules, establishing spacing units, classifying wells, issuing drilling permits, and administering bonds (required to guarantee the eventual proper plugging of wells and surface restoration). BOGC also plugs and restores the surface of orphaned, abandoned, and problem wells, and is empowered to levy both civil and criminal fines. It maintains a library of well cutting samples and core samples in Billings. Since 1993, the board has certified companies to receive tax incentives for horizontal wells and enhanced recovery projects.

The Oil and Gas Conservation Division is supported from three main sources:

- Privilege and license tax (0.3 percent of the market value of crude petroleum and natural gas produced, saved, and marketed or stored within the state or exported from the state [less government royalties])
- An annual injection well fee
- Federal grant funds for the Underground Injection Control (UIC) Program.

The Underground Injection Control Program

BOGC has been administering the UIC Program in Montana since 1996, when primacy for the program was obtained from the U. S. Environmental Protection Agency (EPA).

The objective of the UIC Program is to protect underground sources of drinking water from contamination that could result from the improper disposal of liquid oil-field wastes. Operators apply for a UIC permit through the public notice and hearing process by notifying either the Billings or Helena Oil and Gas Conservation Office.

BOGC's jurisdiction applies to all but Indian lands. Program costs are covered by an annual operating fee of \$200 per injection well and an EPA operating grant of approximately \$105,000 per year.

The UIC Program regulates 860 injection wells. In 1999, UIC field inspectors performed 564 inspections of these wells. Most of these inspections were routine, periodic inspections (264) and the witnessing of mechanical integrity tests (268).

In 1999, there were 80 injection well violations, of which 76 were failure to maintain mechanical integrity. This number of violations is down considerably from 1998, when there were 134 total violations.

Activity Review

Montana's oil production was down approximately 8 percent, from 16.61 million barrels in 1998 to 15.27 million barrels in 1999. Oil production is shown by region in Figure 15, while Table 21 presents information about oil production over the past five years. Crude oil production since 1954 is illustrated in Figure 16.

Figure 15
Oil Production by Region in 1999
 15,266,561 Barrels

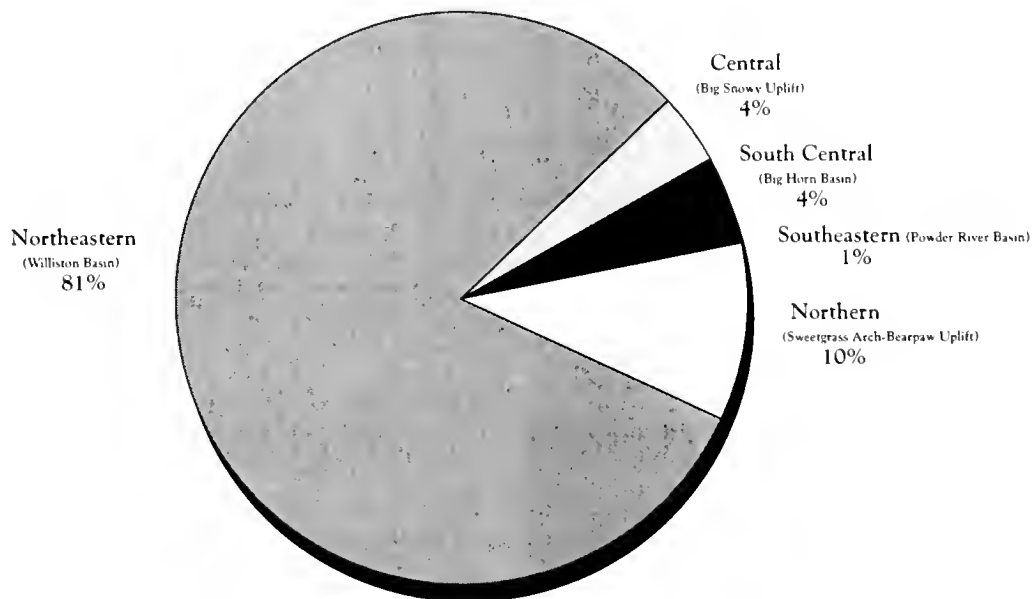


Table 21
Five-Year Summary of Oil Production in Montana

	1995	1996	1997	1998	1999
OIL PRODUCTION IN BARRELS					
Northern Montana	1,783,331	1,735,895	1,677,301	1,582,032	1,495,616
South Central	698,537	653,723	606,858	583,112	609,495
Central	1,040,127	950,865	967,478	815,762	616,955
Northeastern	12,877,305	12,695,462	12,637,980	13,396,334	12,336,935
Southeastern	126,524	115,662	179,406	235,697	207,560
TOTAL	16,525,824	16,151,607	16,069,023	16,612,937	15,266,561
NUMBER OF PRODUCING OIL WELLS					
Northern Montana	2,093	2,029	1,971	1,884	1,843
South Central	132	130	130	131	130
Central	249	239	231	230	191
Northeastern	1,310	1,294	1,301	1,330	1,297
Southeastern	28	46	73	82	70
TOTAL	3,812	3,738	3,706	3,657	3,531

Figure 16
Crude Oil Production in Montana
(Million Barrels per Year)
1954-1999

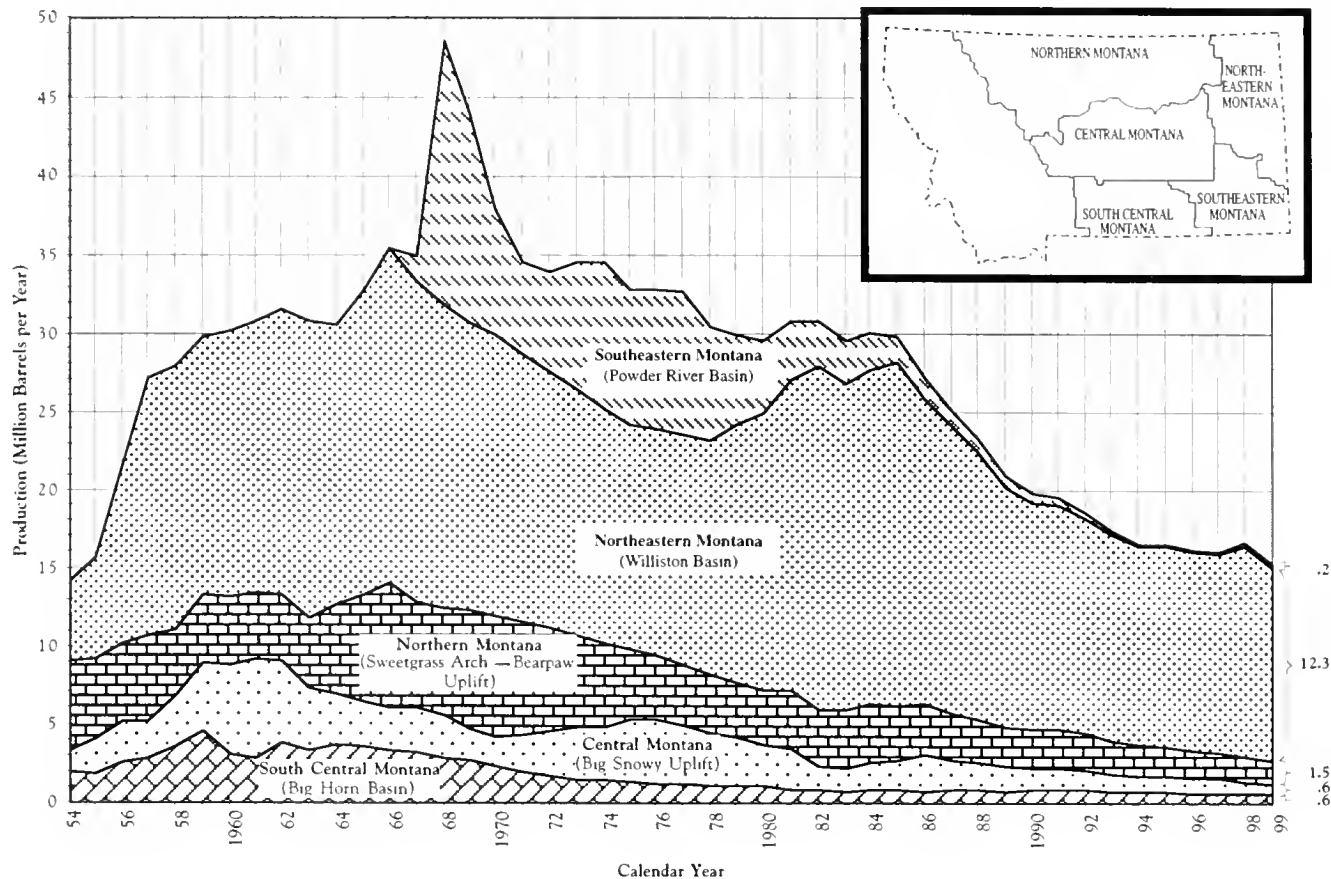
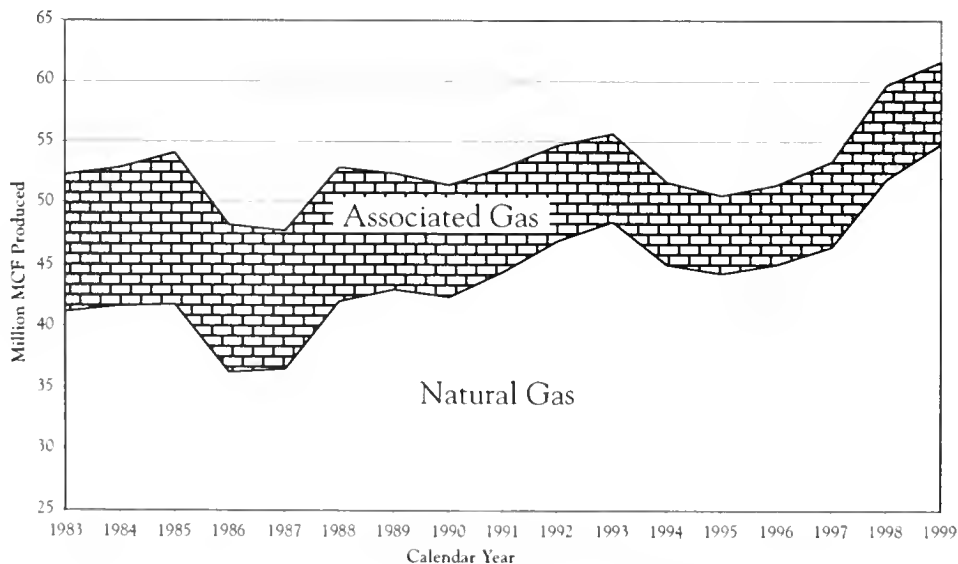


Figure 17
Gas Production in Montana
1983-1999



Gas production increased from 59.8 million MCF in 1998 to 61.6 million MCF in 1999, setting a new record high. Figure 17 shows gas production from 1983 to 1999, while Table 22 summarizes production, imports, and exports of both oil and gas in 1999.

Well drilling increased from 310 wells drilled in 1998 to 482 in 1999. Figure 18 shows the wells completed by region, while Table 23 presents the well information by county. There were 363 new gas wells and 49 new oil wells completed during 1999. Table 24 details well-drilling activity from 1995 through 1999.

Table 22
Summary of 1999 Oil and Gas Activities

OIL

BBLs

Oil Produced	15,266,561
Oil Imported From:	
Canada	40,986,170
Wyoming	<u>12,623,359</u>
TOTAL	53,609,529
Oil Exported	12,100,000

GAS

MCF

Gas Withdrawals	
Natural	54,962,227
Associated	<u>6,684,352</u>
TOTAL	61,646,579
Gas Imported From:	
Canada	4,596,671
North Dakota	6,243,180
Wyoming	<u>17,628,085</u>
TOTAL	28,467,936
Gas Exported To:	
North Dakota	20,075,282
South Dakota	9,786,455
Midwest	<u>21,952,062</u>
TOTAL	51,813,799

Figure 18
Wells Completed in 1999 by Region
(482 Wells)

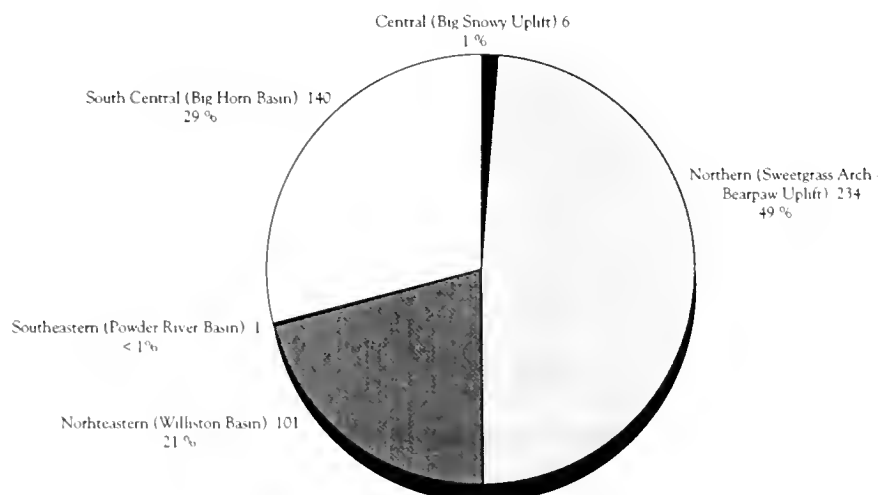


Table 23
Summary of 1999 Well Drilling by County

COUNTY	DEVELOPMENT			EXPLORATORY			SERVICE WELLS	TEMP. ABAND.	TOTAL WELLS
	OIL	GAS	DRY	OIL	GAS	DRY			
Big Horn	0	130	3	0	0	3	0	0	136
Blaine	0	41	9	0	11	12	0	0	73
Carbon	3	1	0	0	0	0	0	0	4
Carter	0	0	0	0	0	1	0	0	1
Chouteau	0	9	2	0	1	1	0	0	13
Daniels	0	0	0	0	0	1	0	0	1
Fallon	29	30	0	0	1	0	1	0	61
Garfield	0	0	1	0	0	1	0	0	2
Glacier	4	0	2	0	0	0	0	0	6
Hill	0	27	11	0	9	4	0	0	51
Liberty	0	6	0	0	7	0	1	0	14
McCone	0	0	0	0	0	3	0	0	3
Musselshell	0	0	0	1	0	0	0	0	1
Petroleum	0	0	0	0	0	1	0	0	1
Phillips	0	54	0	0	2	2	0	0	58
Pondera	3	0	0	1	0	1	0	0	5
Prairie	0	1	0	0	0	0	0	0	1
Richland	2	0	0	0	0	0	0	0	2
Roosevelt	0	0	0	1	0	0	1	0	2
Rosebud	0	0	0	1	0	1	0	0	2
Sheridan	1	0	1	0	0	1	0	0	3
Teton	0	0	0	0	0	1	0	0	1
Toole	1	6	3	1	0	1	1	0	13
Wibaux	1	27	0	0	0	0	0	0	28
TOTAL	44	332	32	5	31	34	4	0	482

Table 24
Five-Year Summary of Wells Drilled

DEVELOPMENT WELLS DRILLED	1995	1996	1997	1998	1999
Oil Wells	53	68	59	44	44
Gas Wells	65	54	194	140	332
Dry Holes	14	15	33	23	32
Service Wells	10	4	4	2	4
TOTAL	142	141	290	209	412
EXPLORATORY WELLS DRILLED	1995	1996	1997	1998	1999
Oil Wells	7	13	31	35	5
Gas Wells	15	10	7	25	31
Dry Holes	44	40	41	38	34
Temporary Abandoned	3	5	2	3	0
TOTAL	69	68	81	101	70
TOTAL WELLS DRILLED	211	209	371	310	482

The 1999 activities reflect a continuing shift in interest to natural gas exploration and production, and a decreased interest in oil prospects. Coal bed methane and conventional gas development projects predominated new well activities.

Geophysical activities continued in 1999, with four contractors receiving permits for 20 seismic projects. The Williston Basin in northeastern Montana had most of these projects. A significant number of the permitted seismic projects involved 3-D techniques.

In 1999, approval was given for seven new horizontal wells and two horizontal re-completions of existing vertical wells. BOGC approved one new tertiary enhanced recovery project, thereby qualifying the incremental increase in production for a lower tax rate. Forty-eight horizontal re-completion efforts were certified for tax purposes.

Drilling permit activity remained steady, with 551 permits to drill issued in 1998 and 549 permits issued in 1999. BOGC's staff performed environmental assessments for each application involving private or state-owned lands prior to permit issuance.

BOGC issued 109 orders during the year. Most of these orders authorized increased well density to accommodate in-fill drilling programs, established permanent spacing for horizontal wells and exception wells, delineated new fields, and allowed exceptions to existing field rules. The board approved Order 99-99 establishing general requirements for operators proposing coal bed methane projects within the area established by DNRC as the Powder River Basin Controlled Groundwater Area.

In 1999, BOGC spent \$767,842 on three plugging and site restoration projects involving orphaned or abandoned wells: (1) \$699,536 on the Balco Site Disposal Project in Richland County; (2) \$2,102 on the Devil's Basin Plug, Abandonment, and Restoration Project in Richland, Roosevelt, and Musselshell Counties; and (3) \$66,204 on the emergency plugging of the Van Winkle #1 well in the Clarks Fork Yellowstone River in Yellowstone County. (The original location of this last well was on land adjacent to the river, but, when the river channel changed, the well ended up in the middle of the river.) These projects were funded through grants from DNRC's Reclamation and Development Grants Program, interest allocated to the board from the Resource Indemnity Trust (RIT), and proceeds from forfeited plugging and restoration bonds.

At the close of the year, BOGC's new World Wide Web server was being installed in the Billings office with a high-speed connection to the Internet in preparation for rollout of its publicly accessible well information database. The URL for the new server is:

www.bogc.dnrc.state.mt.us

RESERVED WATER RIGHTS COMPACT COMMISSION



RESERVED WATER RIGHTS COMPACT COMMISSION

Working to "conclude compacts for the equitable division and apportionment of waters between the State and its people and the several Indian Tribes claiming reserved water rights within the state" (MCA 85-2-701) and "between the State and its people and the federal government claiming non-Indian reserved waters within the state" (MCA 85-2-703).

The Montana Legislature created the Reserved Water Rights Compact Commission (RWRCC) in 1979, the same year that it created the Montana Water Court. The purpose of the commission is to negotiate, on behalf of the State of Montana, with Indian Tribes and federal agencies claiming federal reserved water rights in the state. While they are being negotiated, the claims of the Tribes and federal agencies are suspended from adjudication in the Water Court. After being submitted for public comment in the specific area impacted, a negotiated settlement must be ratified by the Montana Legislature and the Tribal Council (in the case of Indian reserved rights) and approved by the appropriate federal authorities.

Montana was one of the first states to conduct such negotiations, and it is still the only state to do so using a commission. The RWRCC is supported by a 12-member staff.

The Compact Commission

The Reserved Water Rights Compact Commission is made up of nine members who serve for four-year terms. One member is appointed by the Attorney General's Office, four by the Governor's Office, two by the Speaker of the House, and two by the President of the Senate. Current RWRCC members are:

Chris Tweeten, Chair
Helena
Deputy Attorney General

Bob Thoft, Vice Chair
Stevensville
Rancher

Rep. Antoinette "Toni" Hagener
Havre
Retired Teacher

Tara DePuy
Livingston
Park County Attorney

Rep. John "Sam" Rose
Choteau
Rancher/Retired Teacher

Gene Etchart
Glasgow
Rancher

Sen. Chuck Swysgood
Dillon
Trucking

Jack Salmond
Choteau
Rancher/Outfitter

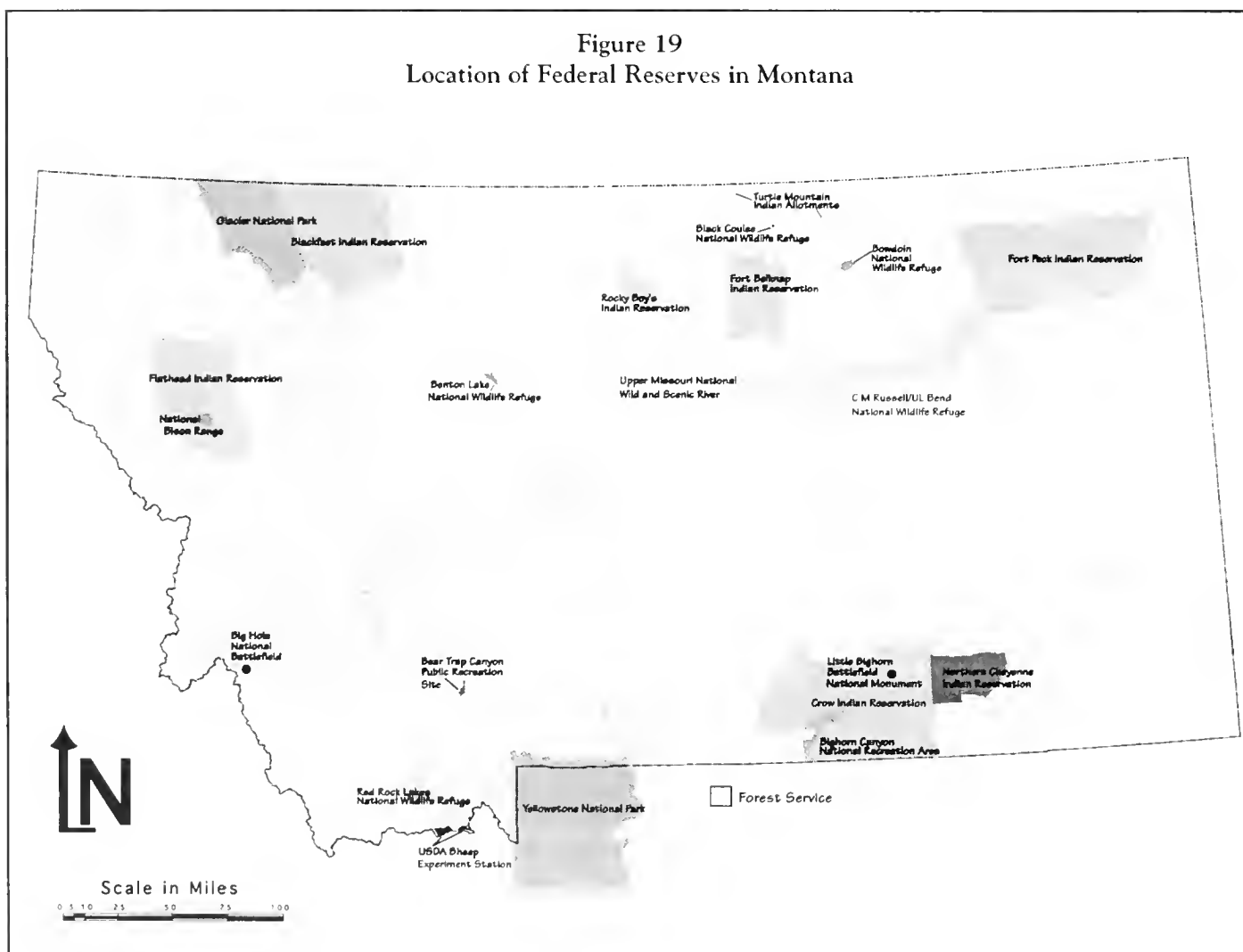
Sen. Bea McCarthy
Anaconda
Teacher

Federal Reserved Water Rights

A federal reserved water right is a right to water that was created when Congress or the President of the United States reserved land out of the public domain. Federal reserves in Montana are shown in Figure 19. The U. S. Supreme Court has ruled that enough water be reserved to meet the purposes for which the reserved lands were designated.

The date that the land was withdrawn and the reservation created is the priority date of a federal reserved water right. Reserved water rights for Indian reservations, for instance, go back to the 1800s. Federal reserved water rights do not have the same restrictions placed on them as on state appropriative rights. For example, a notice of appropriation or a beneficial use is not required to maintain a federal reserved right, and it is not lost due to non-use.

Figure 19
Location of Federal Reserves in Montana



Completed Compacts

The commission has completed the nine compacts listed in Table 25.

Table 25
Compacts Concluded by the
Reserved Water Rights Compact Commission

Compact	Date	Comments
Fort Peck - Assiniboine and Sioux Tribes MCA 85-20-201	May 1985	This compact contains a provision for water marketing by the Tribes, making federal legislation necessary. That federal legislation has not yet passed. This compact is currently under consideration by the Water Court.
Northern Cheyenne Tribe MCA 85-20-301 PL 102-374	September 1992	Included in the compact was a requirement that the federal government and the State of Montana contribute funds to repair and enlarge the unsafe Tongue River Dam, which has been completed. Planning and oversight of dam construction were handled by the DNRC Water Resources Division. This compact has been approved by the Water Court.
U.S. National Park Service Yellowstone National Park Glacier National Park Big Hole National Battlefield MCA 85-20-401	January 1994	This compact includes an article providing a controlled groundwater area to protect the hydrothermal system in Yellowstone National Park. It is now in the Water Court approval process.
U.S. National Park Service Little Bighorn Battlefield National Monument Bighorn Canyon National Recreation Area MCA 85-20-401	May 1995	Codified with the first compact with the National Park Service (above), this compact has been filed with the Water Court.
U.S. Bureau of Land Management (BLM) Wild and Scenic Missouri River Beartrap Canyon, Madison River MCA 85-20-501	March 1997	This compact settles the instream flow rights for two river segments. It has received final approval from BLM management and the U.S. Department of Justice. It will be submitted to the Montana Water Court.
U.S. Fish and Wildlife Service (FWS) Benton Lake National Wildlife Refuge Black Coulee National Wildlife Refuge MCA 85-20-701	March 1997	This compact settles the reserved water rights for two of the six national wildlife refuges. It has been approved by FWS and the U.S. Department of Justice. The Benton Lake Compact has been submitted to the Montana Water Court.
Chippewa Cree Tribe of the Rocky Boy's Indian Reservation MCA 85-20-601 PL 106-163	April 1997	This compact allocates 10,000 acre-feet per year (AFY) to the Tribe from water arising on the reservation. The federal authorization includes 10,000 AFY from water stored in Tiber Reservoir. The compact was approved by the Chippewa Cree Tribal Council, passed by the legislature, and signed by the governor. It was approved by Congress and signed by the president in 1999. It has been submitted to the Montana Water Court for entry of a decree.

Continued on page 78

Table 25
Compacts Concluded by the
Reserved Water Rights Compact Commission
(Continued from page 77)

Compact	Date	Comments
U.S. Fish and Wildlife Service (FWS) Red Rock Lakes National Wildlife Refuge MCA 85-20-801	April 1999	This compact settles the reserved water rights for another of the six national wildlife refuges for which federal reserved rights are claimed in Montana. The Red Rock Lakes settlement has been ratified by the legislature and approved by appropriate federal agencies. The compact does not have to be approved by Congress. It will now be submitted to the Montana Water Court.
Crow Tribe MCA 85-20-901	June 1999 Special Legislative Session	This compact allocates 500,000 acre-feet per year (AFY) of the natural flow of the Bighorn River to the Crow Tribe for existing and future uses. The U. S. Bureau of Reclamation will allocate 300,000 AFY of storage in Bighorn Lake to the Tribe. On the area north of the reservation known as the "Ceded Strip," the Tribe has the right to use 47,000 AFY from any water source on lands or interests that Congress restored to the Tribe or on any lands acquired and held in trust for the Tribe. The compact provides protection for all current state and Tribal water users in the affected water basins and requires closing some basins to new appropriations of water. The compact authorizes the State to pay the Crow Tribe \$15 million in exchange for the Tribe's dismissal of a coal severance tax lawsuit and for the State's portion of the cost-share for the water rights settlement. A Streamflow and Lake Level Management Plan for Bighorn River and Lake was negotiated and finalized by the parties in 2000, as required by the compact. The agreements must now go to Congress for approval and must pass a Crow Tribal referendum vote.

Current Negotiations

Commission members and staff have been concentrating on negotiations concerning three Indian reservations and two federal agencies.

Indian

Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation

Formal negotiations have proceeded since 1996, when the Tribes proposed an approach to settlement. Commission, Tribal, and federal staff evaluated the impact of the proposal on irrigation in the Milk River basin. The Tribes, the United States, and the commission meet regularly and continue to discuss ways to mitigate the impact of the Tribal proposal and develop methods to coordinate administration and enforcement efforts in the basin. Public meetings have been held in the Milk River basin to gain input from citizens. The parties hope to finalize negotiations in time for the 2001 legislative session.

Blackfeet Tribe of the Blackfeet Reservation

In the early 1990s, the Blackfeet Tribe chose to litigate rather than negotiate. In November 1997, the Tribal chair informed the commission that the Tribe proposed to resume negotiations and presented a proposal for settlement. A six-month stay

of litigation was requested and was entered by the Water Court in December of 1997; this stay has been extended. In January 1998, an initial negotiating session was held in Great Falls to discuss whether negotiations should resume and, if so, how the parties should proceed. The commission accepted the Tribe's request to resume negotiations, and a negotiating session was held in Helena in December 1998. Since then, staff meetings have been held to exchange technical information that will allow the State of Montana and the United States to evaluate the Tribe's proposal.

Confederated Salish and Kootenai Tribes of the Flathead Reservation

In May 2000, the commission, Tribe, and United States met in a formal negotiating session to begin discussing the complicated issues involved in developing a work plan for moving forward with negotiations. Technical work will begin this fall, and a second negotiating session is scheduled for September 2000 to discuss the technical work plan.

Federal

U.S. Department of the Interior, Fish and Wildlife Service

National Wildlife Refuges

The U.S. Fish and Wildlife Service (FWS) claims federal reserved water rights for six national wildlife refuges in Montana. A compact for Benton Lake National Wildlife Refuge and Black Coulee National Wildlife Refuge passed the 1997 legislature and was signed by the governor. It was approved by the federal parties in July 1997, and the Benton Lake portion has been filed with the Water Court. A settlement agreement for Red Rock Lakes was ratified by the 1999 Montana Legislature and has been approved by the appropriate federal agencies. It will also be filed with the Montana Water Court.

Negotiations with FWS on the three remaining units (listed below) are continuing.

- Bowdoin National Wildlife Refuge
- Charles M. Russell/UL Bend National Wildlife Refuge
- The National Bison Range

U.S. Department of Agriculture, Forest Service

National Forests

Technical work is continuing under Phase III of the Memorandum of Understanding between the commission and the U.S. Forest Service (USFS). USFS has identified 750 streams where it desires to protect natural flows, and the commission staff is evaluating the potential impact on existing water rights. Potential future water requirements are being identified. Staff members have attended regular meetings of several local watershed coordination groups in an effort to inform the public about the negotiations. The commission has asked the Forest Service to identify

all situations where it believes it has the power, under its land use authority, to stipulate bypass flows or an amount of instream flow that water users may be required to leave in the stream on national forest lands. The commission staff continues to track activities in Idaho, Wyoming, and Colorado regarding USFS federal reserved water rights.

Other Reserved Rights

Indian

The Turtle Mountain Band of Chippewa owns numerous small allotments scattered throughout Montana. At this time, no negotiations or technical work have been started with the Turtle Mountain Band of Chippewa for settlement of its federal reserved water rights in Montana.

Federal

Negotiators have not begun to discuss the reserved rights of the USFS Agricultural and Sheep Experiment Stations at this point.

TRUST LAND MANAGEMENT DIVISION



TRUST LAND MANAGEMENT DIVISION

Manage the State of Montana's trust land resources to produce revenues for the trust beneficiaries while considering environmental factors and protecting the future income-generating capacity of the land.

Overview

General background information on the Trust Land Management Division is available on the department's website:

www.dnrc.state.mt.us/trust/tlandhome.htm

History

By the Enabling Act approved February 22, 1889, the Congress of the United States granted to the State of Montana, for common school support, sections sixteen and thirty-six in every township within the state. Some of these sections had been homesteaded, some were within the boundaries of Indian reservations, and yet others had been otherwise disposed of before passage of the Enabling Act. To make up for this loss, and in lieu thereof, other lands were selected by the State of Montana.

The Enabling Act and subsequent acts also granted acreage for other educational and state institutions, in addition to the common schools. The original common school grant was for 5,188,000 acres. The additional acreage provided for other endowed institutions included 668,720 acres, for a total of 5,856,720 acres. The total acreage figure (see Figure 20) fluctuates through the years due to land sales and acquisitions. Mineral acreage now exceeds surface acreage because the mineral estate has been retained when lands are sold. Surface acreage at the end of FY 2000 totals over 5.1 million acres; mineral acreage exceeds 6.3 million acres.

The Permanent Fund

The Enabling Act provided that proceeds from the sale and permanent disposition of any of the trust lands, or part thereof, shall constitute permanent funds for the support and maintenance of the public schools and the various state institutions for which the lands had been granted. The Montana Constitution provides that these permanent funds shall forever remain inviolate, guaranteed by the State of Montana against loss or diversion. These

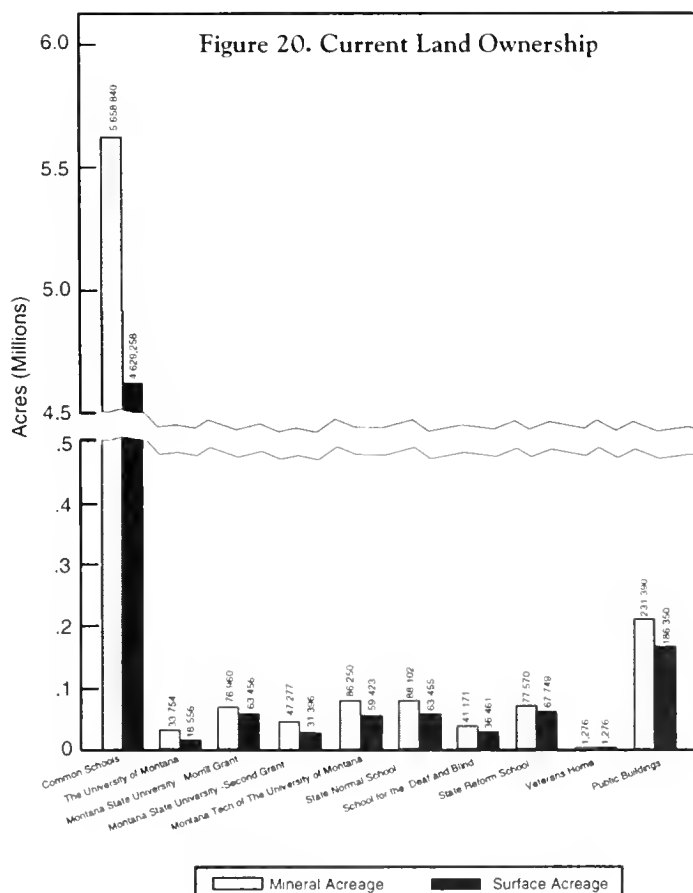
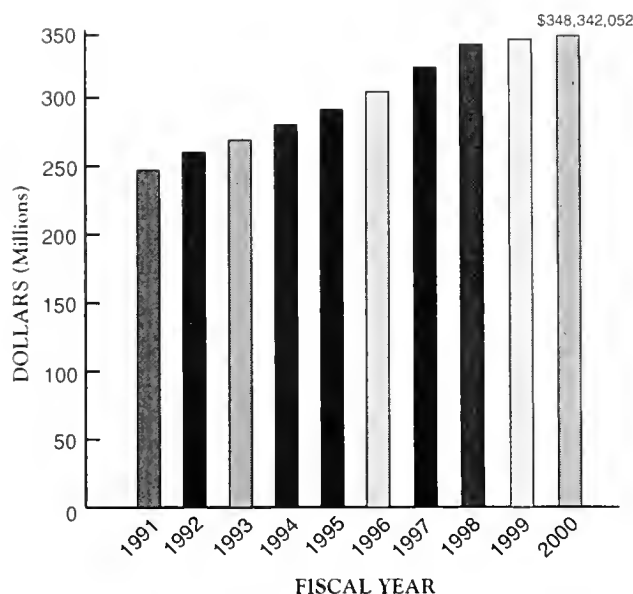


Figure 21. Permanent Fund Balance



funds are often referred to as “nondistributable.” The permanent trust balance is shown in Figure 21; Table 26 shows nondistributable receipts for trust revenue for FY 2000 and the current balance of each permanent trust fund.

Interest and Income

The Enabling Act further provided that rentals received on leased lands, interest earned on the permanent funds arising from these lands, interest earned on deferred payments on lands sold, and all other actual income shall be available for the maintenance and support of such schools and institutions. These funds are referred to as “distributable”; receipts for FY 2000 trust revenue are detailed in Table 26.

Table 26
Revenue Generated for the Trusts
and Permanent Fund Balances in Fiscal Year 2000

Trust	Distributable Revenue	Permanent Fund (Nondistributable Revenue)	
	2000 Revenue	2000 Revenue	Current Balance
Common Schools	\$44,438,116	\$11,188,895	\$324,272,892
Other Trusts			
The University of Montana	\$182,431	\$59,697	\$1,478,499
Montana State University - Morrill Grant	\$324,708	\$56,367	\$2,872,243
Montana State University - Second Grant	\$705,370	\$908,745	\$6,545,752
Montana Tech of The University of Montana	\$553,785	\$21,117	\$3,090,368
State Normal School	\$525,048	\$244,440	\$5,473,496
School for the Deaf and Blind	\$248,339	\$478,292	\$2,469,111
State Reform School (Pine Hills)	\$300,239	\$169,848	\$2,122,949
Veterans Home	\$7,730	\$0	\$16,742
Public Buildings	\$1,960,809	NA	NA

Distribution of Revenues

Each section of state trust land is assigned to a specific trust. Distribution of revenues is handled in three different ways, as explained in the following subsections, depending on the section of trust land that generated the revenue.

The Trust Land Management Division also administers land for some other state agencies, in addition to state trust land. Revenue generated from that land is transferred directly to the state agency.

The Trust Land Management Division is funded by a combination of trust revenues, as delineated in Figure 22.

Common School Trust

The distribution of revenues generated from common school trust land is illustrated in Figure 22. From the distributable receipts, a small percentage is used to fund the Resource Development Account and the State Timber Sale Account. Ninety-five percent of the remaining distributable revenue is distributed yearly to the state General Fund for use by the public schools of the state. The other 5 percent, together with nondistributable revenue, comprise the Permanent Fund. The interest earned on the Permanent Fund is also distributed to the General Fund for use by the public schools, with the exception of 5 percent, which is returned to the Permanent Fund for reinvestment.

Trusts Other Than the Common School Trust

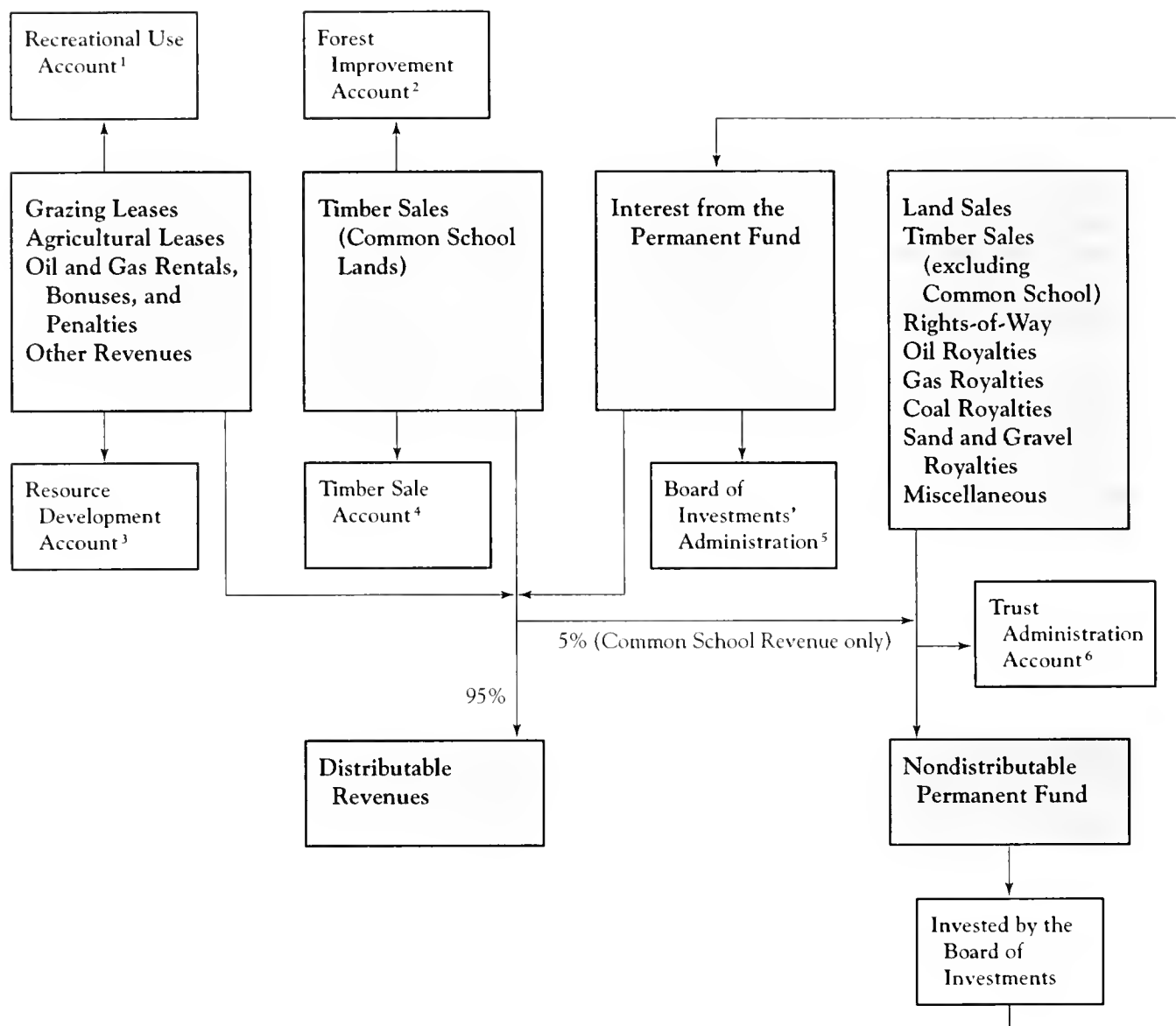
Distribution of revenues to the other trusts is similar. A small percentage goes to the Resource Development Account, but no funds go to the State Timber Sale Account. All of the remaining distributable receipts go directly to the trust recipient. Included in "other" trusts are:

- The University of Montana
- Montana State University - Morrill Grant
- Montana State University - Second Grant
- Montana Tech of The University of Montana
- State Normal School (Montana State University-Billings and Western Montana College of The University of Montana)
- School for the Deaf and Blind
- State Reform School (Pine Hills)
- Veterans Home

Public Buildings

Revenue received on public buildings trust land is all distributed to the Department of Administration. There is no permanent fund for the public buildings trust.

Figure 22. Distribution of Revenues
from Common School Trust Land



1. The Recreational Use Account is funded by \$1.50 from each General Recreational Use License sold.
2. The Forest Improvement Account is funded by additional fees assessed on individual timber sales.
3. The Resource Development Account is limited to a small percentage of distributable receipts excluding timber sale income. The purpose of the account is to invest in improving and developing state trust lands in order to increase the income-producing capacity of the lands.
4. The State Timber Sale Account, comprised of timber sale revenue, contains that amount appropriated by the legislature each year to be used specifically for timber sale preparation and documentation. The amount appropriated in FY 2000 was \$1,691,524.
5. The Board of Investments' administration of the Permanent Fund is funded by a portion of the annual interest generated from those funds.
6. The Trust Administration Account was enacted by the 1999 Legislature. This funding utilizes a portion of the annual nondistributable revenue stream not to exceed 1 1/8 percent of the Permanent Fund balance.

Purpose

The purpose of the Trust Land Management Division is to administer and manage the state trust timber, surface, and mineral resources for the benefit of the common schools and the other endowed institutions in Montana, under the direction of the State Board of Land Commissioners. The board, which is often called the "State Land Board," consists of Montana's top elected officials:

- Marc Racicot, Governor
- Nancy Keenan, Superintendent of Public Instruction
- Mike Cooney, Secretary of State
- Joe Mazurek, Attorney General
- Mark O'Keefe, State Auditor

The division is divided into four primary programs: agriculture and grazing management, forest management, minerals management, and special use management. Program administration, direction, oversight, and support are provided by staff and program specialists located in Helena and Missoula. On-the-ground management is provided by field personnel located throughout the state.

The department's obligation is to obtain the greatest benefit for the school trusts. The greatest monetary return must be weighed against the long-term productivity of the land to ensure continued future returns to the trusts. Total revenues generated by the Trust Land Management Division over the last five years are listed by activity in Table 27. This table contains not only trust revenues, but also those revenues collected for other state entities, revenues appropriated to fund a portion of the division's programs, and other miscellaneous revenues collected by the division.

The Trust Land Management Division distributed over \$49 million in earnings and interest directly to the public schools and other entities in FY 2000. In addition, the program generated over \$13 million in nondistributable revenue in FY 2000, increasing the balance to \$348,342,052.

Return on Asset Value Report

Senate Bill 411, passed by the 1999 Legislature and codified at MCA 77-1-223-225, requires the State Board of Land Commissioners to provide annual reports regarding the average return of revenue on asset value to trust beneficiaries of forested lands. This report is for forested lands classified by MCA 77-1-401 as Class 2 lands that are held in trust for the beneficiary. *"The report must include for each beneficiary:*

- (1) the total acreage of forested land held in trust;*
- (2) a summary of the asset value of the forested tracts held in trust;*
- (3) a calculation of the average return of revenue on asset value for the forested tracts held in trust; and*
- (4) a listing by each department land office of the total acreage of forested land administered for the trust beneficiary and a calculation of the average return of revenue on asset value for lands designated to the trust beneficiary."*

A summary of the report for FY 2000, entitled *Report on Return on Asset Value by Trust and Land Office for Classified Forested Lands*, is included as Appendix B.

Table 27
Five-Year Summary of
Revenue Generated (by Activity)

Activity	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000
Agriculture and Grazing Management					
Grazing leases	\$4,385,636	\$3,747,968	\$4,113,142	\$4,608,145	\$4,494,637
Agricultural leases	<u>10,087,192</u>	<u>10,046,553</u>	<u>9,318,295</u>	<u>8,644,162</u>	<u>9,331,416</u>
Total	\$14,472,828	\$13,794,521	\$13,431,437	\$13,252,307	\$13,826,053
Forest Management					
Timber sales	\$4,301,854	\$5,761,809	\$6,259,332	\$5,905,196	\$10,591,657
Minerals Management					
Oil and gas revenues					
Rentals/bonuses/penalties	\$4,221,441	\$1,971,545	\$2,400,550	\$2,083,626	\$2,966,285
Royalties	2,849,622	3,618,924	2,810,151	2,200,764	3,684,595
Seismic exploration	25,655	41,705	29,378	13,825	11,075
Aggregate minerals					
Rentals	100	100	100	250	250
Royalties	118,458	217,660	208,845	213,185	245,693
Coal					
Rentals/bonuses	68,247	38,899	46,290	44,371	44,371
Royalties	3,529,980	6,255,318	2,759,073	2,312,533	4,649,634
Other minerals					
Rentals/penalties	68,081	86,804	73,081	49,412	32,246
Royalties	<u>41,217</u>	<u>24,277</u>	<u>23,006</u>	<u>8,439</u>	<u>8,878</u>
Total	\$10,922,801	\$12,255,232	\$8,350,474	\$6,926,405	\$11,643,027
Special Use Management					
Rights-of-way	\$269,642	\$1,484,511	\$141,989	\$157,231	\$279,014
Cabin and homesite leases	426,560	482,584	553,095	616,757	718,290
Land sales	0	323,135	18,844	254,917	261,884
Special use leases and licenses	374,101	437,354	418,361	412,213	609,193
Recreational use					
General licenses	216,505	306,755	340,107	348,298	381,740
Special recreational use licenses	<u>57,118</u>	<u>109,376</u>	<u>65,621</u>	<u>86,165</u>	<u>98,948</u>
Total	\$1,343,926	\$3,143,715	\$1,538,017	\$1,875,581	\$2,349,069
Other					
Trust and legacy interest	\$29,952,079	\$23,608,293	\$25,820,410	\$26,024,064	\$25,620,337
Other revenues	<u>1,871,234</u>	<u>2,113,233</u>	<u>867,351</u>	<u>770,200</u>	<u>847,978</u>
Total	\$31,823,313	\$25,721,526	\$26,687,761	\$26,794,264	\$26,468,315
TOTAL	\$62,864,722	\$60,676,803	\$56,267,021	\$54,753,753	\$64,878,121

Agriculture and Grazing Management

The Agriculture and Grazing Management Bureau supervises the management and leasing of approximately 10,000 agreements for crop and rangeland uses on 4.9 million acres of school trust lands throughout the state. These duties are accomplished by administrative staff and specialists located in the department's Helena office and by staff located in field offices statewide.

Surface Leasing

The program is responsible for the administrative functions associated with maintaining surface lease agreements. Each year, responsibilities include processing approximately 1,000 lease renewals; advertising, competitively bidding, and issuing approximately 50 new leases; reviewing and processing assignments, subleases, pasturing agreements, custom farming agreements, pledges, and mortgages; and collecting, verifying, and posting rentals and fees.

Agricultural Lands

Currently 3,000 agreements include agricultural use of state trust lands. Crops raised on these lands are primarily dryland hay and small grains, but also include irrigated grain crops, corn, sugar beets, potatoes, canola, safflower, alfalfa seed, and native grass seed.

In FY 2000, revenues totaling \$9,331,416 were received from agricultural leasing (see Figure 23). The majority of the leases are on a crop-share basis with the minimum share of 25 percent set by statute. In addition to receiving rental payments from lessees, the state participates in and receives farm program payments from the U. S. Department of Agriculture (USDA) Farm Service Agency, as authorized under the Agricultural Market Transition Act of 1996. For FY 2000, this amount exceeded \$4,275,000 for production flexibility contracts, lands enrolled in the Conservation Reserve Program (CRP), market loss assistance payments, and loan deficiency payments.

Grazing Lands

Approximately 8,500 agreements include grazing use of trust lands. The 4.3 million acres of classified grazing and forest lands have an estimated carrying capacity of 1,090,000 animal unit months (AUMs). The minimum rental rate for grazing leases is set by a formula which includes the average weighted price for beef cattle sold in Montana during the previous year. In FY 2000, grazing leases generated \$4,494,637 (see Figure 24).

Land Management

The program manages the agricultural and grazing resources on the lands administered by the bureau. This responsibility includes evaluation and assessment of range and cropland condition; compliance with the Montana Environmental Policy Act (MEPA); administration of archeological, paleontological, and historical properties on state trust land; investigations of lease noncompliance; participation in the Federal Farm Program; and oversight of water developments, water rights, and improvement projects such as range renovations and resource development.

Figure 23. Agricultural Rentals

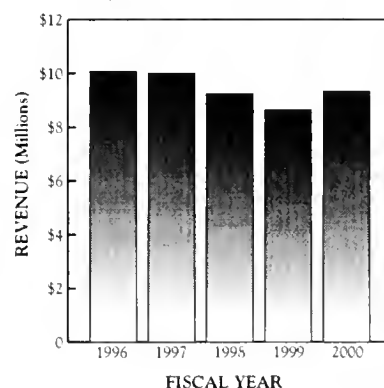
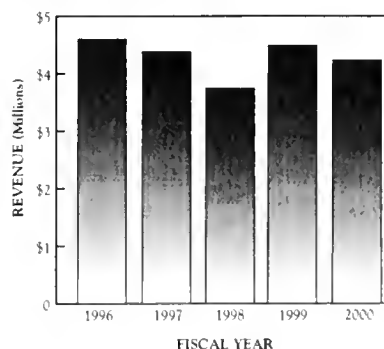


Figure 24. Grazing Rentals



During FY 2000, several aspects of paleontological and archaeological investigative work were carried out on state lands.

- A paleontological team from Notre Dame utilized earth-moving equipment to remove several cubic yards of overburden from a dinosaur bone bed in McCone County. Several hadrosaur bones, some in a near perfect state of preservation, were recovered.
- In Teton County, the Museum of the Rockies is currently excavating the remains of a tyrannosaurid, which will be curated at the museum in Bozeman.
- Bureau staff conducted feature mapping and initial archaeological excavation of a bison-kill-processing site in Judith Basin County that dates to about A.D. 1500. Archaeological investigative work was conducted mainly to salvage the cultural materials and associated data that are being eroded away, especially during high water flows of an adjoining creek.

Also in FY 2000, efforts were continued to take advantage of the loan deficiency payments offered under the Federal Farm Program. These payments are available when commodity prices fall below the loan rate set by the U.S. Department of Agriculture. This work resulted in additional agricultural revenue of approximately \$400,000.

Forest Management

The Forest Management Bureau oversees forested, state-owned trust lands to provide income to the various school trusts. Income is derived from the sale of forest products.

The bureau also provides program direction and support to the area land offices. That support is provided in several subprograms or areas of expertise: forest land management, planning, hydrology, soils, economics, wildlife, and fisheries. Support and program direction are offered in several different ways: the development of resource management standards, site-specific review and recommendations for proposed management activities, and participation as members of interdisciplinary teams that develop land management proposals.

The area land offices have primary responsibility for on-the-ground management activities. With assistance from the Forest Management Bureau, they conduct environmental reviews of proposed management activities, prepare contracts for those activities, and complete the necessary field work.

The State Forest Land Management Plan (SFLMP), approved by the State Land Board in June 1996, guides the management of the forested trust lands. This guidance is provided in the form of general management philosophy and specific resource management standards. The strategic guidance provided by SFLMP is summarized in this excerpt:

Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically diverse forests. Our understanding is that a diverse forest is a stable forest that will produce the most reliable and highest long-term revenue stream. Healthy and biologically diverse forests would

provide for sustained income from both timber and a variety of other uses. They would also help maintain stable trust income in the face of uncertainty regarding future resource values. In the foreseeable future timber management will continue to be our primary source of revenue and primary tool for achieving biodiversity objectives.

Forest Improvement

The program uses fees from harvested timber to improve the health and productivity of trust forests. Uses of these fees authorized by statute include disposal of logging slash, reforestation, acquiring access and maintaining roads necessary for timber harvest, other treatments necessary to improve the condition and income potential of state forests, and compliance with other legal requirements associated with timber harvest. Specific activities include piling of logging slash, prescribed burning, site preparation, seed collection, seedling production, tree planting, thinning, genetic tree improvement, erosion control, and culvert replacement.

In FY 2000, the activities listed in Table 28 were undertaken to improve the health and productivity of forested state trust lands.

Table 28
Forest Improvement Activities in FY 2000

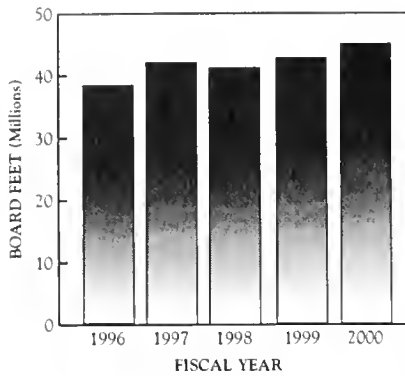
Tree planting	307 acres
Tree netting	77 acres
Net maintenance ¹	230 acres
Precommercial thinning (contract)	1,272 acres
Precommercial thinning (seasonal crews)	50 acres
Noxious weed spraying (seasonal crews)	2,000 acres
Herbicide application	218 acres
Brush piling—excavator	306 acres
Brush piling—dozer	270 acres
Pile burning (seasonal crews)	1,260 acres
Broadcast burning	930 acres
Jackpot burning	395 acres
Hand brush work	35 acres
Tree improvement areas managed	16 acres
Fireline construction	8 miles
Road maintenance	40 miles

1. Net maintenance includes replacing, maintaining, or removing seedling netting.

Forest Product Sales

The program incorporates all activities and expenditures required to grow, harvest, and sell forest products from state trust lands efficiently. Activities within this program include field layout of timber sales; development of sale prescriptions; MEPA documentation; preparation of sale contracts, prospectuses, and notices; both field and office administration of timber sales; and sale billing and accounting. These responsibilities are shared among field foresters, area staff, and bureau staff.

Figure 25. Timber Volume Sold

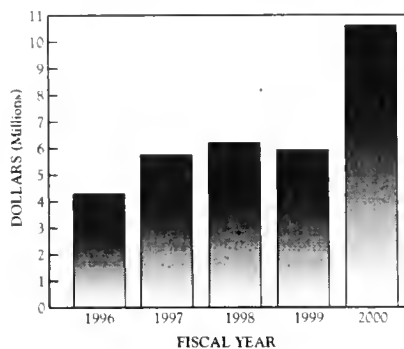


The estimated annual sustainable harvest from forested trust lands is 42.164 million board feet. That figure is the department's annual sales target, until the sustained yield study conducted in 1996 is revisited. Review is required at least once every 10 years, according to MCA 77-5-221-223. Actual sales in FY 2000 were 44.9 million board feet (see Figure 25).

During the year, \$10,591,657 in revenue was generated from the harvest of timber (see Figure 26).

Also in FY 2000, 21 timber sales and 87 timber permits were prepared for a total of 45.4 million board feet (see Figure 27). All timber sales and permits are developed, analyzed, and reviewed in the field by foresters and resource specialists to ensure that those sales comply with all applicable laws, policies, and management direction. At the end of FY 2000, DNRC had 60.5 million board feet under contract with an approximate value of \$11 million.

Figure 26. Timber Revenue Received



In FY 2000, the Forest Management Bureau and field offices spent considerable time developing and implementing strategies and analytical techniques for applying the State Forest Land Management Plan to DNRC projects. The development of implementation guidance and monitoring procedures, as well as the training of personnel, are ongoing processes.

Inventory

The program is responsible for the collection and analysis of forest resource inventory data in Montana. The program provides a current, comprehensive inventory of the timber resources on 617,000 acres of forested land administered by the Department of Natural Resources and Conservation. Stand-level inventory maps have been drawn and resource data collected for 1,023,000 forested and nonforested acres of state trust land. The development and maintenance of a geographic information system (GIS) used to support planning for forest management activities and environmental analyses is another responsibility of this program.

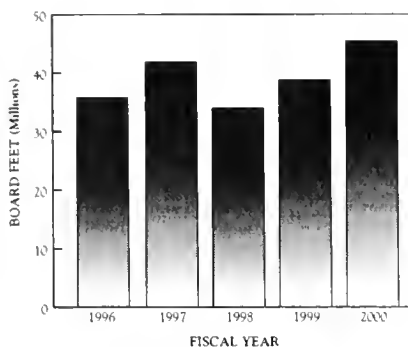
In FY 2000, the inventory program added 392,000 acres to the stand-level inventory and updated the existing stand inventory maps and data for 2,500 acres. The GIS provided analysis and maps for 17 forest land management projects and updated existing maps and associated databases. In addition, contractors and interns digitized 87,400 acres of stand inventory polygons for the Kalispell and Missoula Unit Offices.

Old Growth Issue

Since the State Forest Land Management Plan was adopted in 1996, the Forest Management Bureau has been involved in developing and implementing guidelines for meeting SFLMP's old growth commitments. The initial biodiversity/old growth guidelines, which were consistent with direction from SFLMP and adopted by the bureau in 1998, have been a source of controversy.

In August 1999, the bureau embarked on a strategy to address internal and external old growth concerns. Initially, the Montana Consensus Council was contracted to conduct a situation assessment to identify all of the issues and concerns surrounding old growth management on school trust lands. Following completion of the situation assessment in November 1999, DNRC started an agency-directed

Figure 27. Timber Volume Prepared for Sale



process to revise the 1998 biodiversity guidelines. Between January and June of 2000, the DNRC Old Growth Working Group worked to address both internal and external concerns and produced two options for revising the biodiversity guidance. DNRC also sought input from a public interest group to develop a third option. All three options are currently out for public and technical review and can be viewed at:

www.dnrc.state.mt.us/eis_ea.html

After reviewing the technical and public comments, DNRC will make a recommendation to the State Land Board regarding adopting the supplemental guidance.

Minerals Management

The Minerals Management Bureau is responsible for leasing, permitting, and managing approximately 2,573 oil and gas, metalliferous and non-metalliferous, coal, and sand and gravel agreements on 6.3 million acres of school trust land and more than 100,000 acres of other state-owned land throughout Montana.

General background information on bureau activities is available on the department's website:

www.dnrc.state.mt.us/trust/mmb.htm

A calendar of key lease sale activities and dates is posted, and lease sale lists and sale results are available for viewing or downloading.

Mineral Leasing

The program is responsible for reviewing and processing all mineral lease and permit applications; advertising, competitively bidding, and issuing new leases; reviewing and approving lease assignments; and collecting, verifying, and posting lease rentals and production royalties.

Revenues received in FY 2000 are listed in Table 29; the relative percentage derived from each mineral type is illustrated in Figure 28.

Table 29 Revenues Received from Minerals in FY 2000			
Oil and Gas	Rentals/bonuses/penalties		\$2,966,285
	Royalties		3,684,595
	Seismic exploration		11,075
Aggregate Minerals	Rentals		250
	Royalties		245,693
Coal	Rentals/bonuses		44,371
	Royalties		4,649,634
Other Minerals	Rentals/penalties		32,246
	Royalties		<u>8,878</u>
TOTAL			\$11,643,027

Figure 28. Total Mineral Revenue by Mineral Type

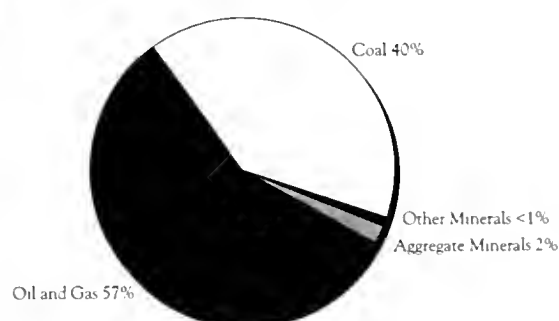
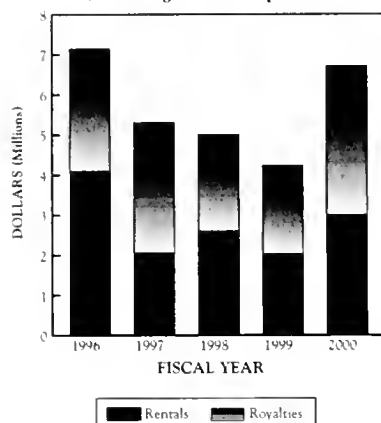


Figure 29. Oil and Gas Revenue
(excluding Seismic Exploration)

Oil and Gas Leasing

The program is responsible for the leasing and monitoring of 2,433 oil and gas leases, 534 of which are currently productive. The number of oil and gas leases managed is up 8.1 percent, and the number of currently producing leases is up 14.3 percent, compared to FY 1999. Activities related to existing leases include collecting, verifying, and posting rental, royalty, delay drilling, and shut-in payments; reviewing and approving assignments and tracking working interest ownership; reviewing and preparing for approval communitization agreements and unit operating agreements; and coordinating with field offices the review and approval of all proposed physical operations on state leases. In addition, four oral auctions of new oil and gas leases are prepared and conducted each year.

In FY 2000, 923,777 barrels of oil were produced; 5,050,552 MCF of gas and 375,113 gallons of condensate were also produced. Revenues received over the last five fiscal years are shown in Figure 29. Oil production declined 6.5 percent from FY 1999. However, the increase in average price from \$10.50 per barrel in FY 1999 to \$20.21 per barrel in FY 2000 accounted for the significant increase in oil royalty revenue. Gas production in FY 2000 increased 19.6 percent, while the price increased 36.0 percent, compared to FY 1999, which resulted in a significant increase in royalty revenue.

Other Mineral Leasing

The program also administers a wide variety of leases—including metalliferous and non-metalliferous leases, coal leases, gravel permits, and land use licenses for non-mechanized prospecting—for all other mineral activity on state trust land. Royalties from coal doubled compared to FY 1999. The volume mined doubled, while the average price remained stable. The volume mined can vary significantly from year to year, as mining activity moves onto or off state land within the normal sequence of mining operations. A five-year summary of coal royalties is shown in Figure 30. Royalties and rentals are also collected for minerals such as bentonite, clay, gold and associated minerals, peat, and shale.

The bureau continued working with the U.S. Bureau of Land Management on a joint environmental assessment covering lease proposals on both federal and school trust land immediately adjacent to the existing Spring Creek Coal Mine in Big Horn County. It is currently anticipated that leases will be offered for both the federal and school trust coal lands in FY 2001.

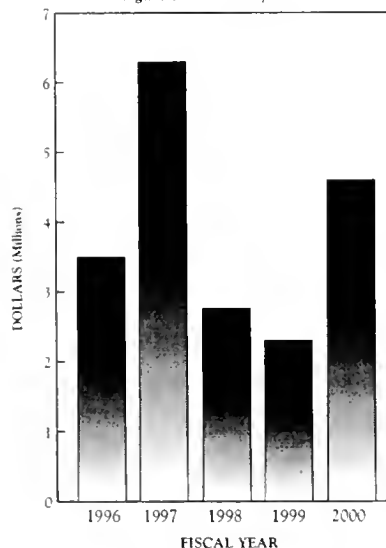
As with oil and gas leasing, the program also reviews and approves all proposed physical activity on the state leases.

Royalty Auditing and Accounting

The program provides additional revenue to the school trusts through programmatic audits. The program serves an important role in identifying royalty under- and over-reporting, rectifying discrepancies, and raising the level of voluntary compliance.

Audit activity in FY 2000 underscored the improved level of compliance. Several of the completed audits indicated that no additional royalties were due. Of the 21

Figure 30. Coal Royalties



audits currently pending from FY 2000, preliminary assessments of amounts due range from zero to over \$82,000. However, final assessments are frequently adjusted as additional information is obtained from the lessees.

Abandoned Well Reclamation

The Board of Oil and Gas Conservation (BOGC) has regulatory and bonding authority on oil and gas wells in Montana, including those wells on state trust lands. BOGC seeks funding from the Reclamation and Development Grants Program, administered by DNRC's Conservation and Resource Development Division, to reclaim wells where there is inadequate bonding or no responsible party. The Minerals Management Bureau works with BOGC staff to integrate problem wells on state trust land into BOGC's grant requests.

Riverbed Leasing

The Minerals Management Bureau continues its efforts to clarify title to the beds and islands of navigable rivers. Pursuant to statute, the state owns those lands below the low-water mark, islands and their accretions formed in the riverbeds after statehood, and abandoned channels formed by avulsion. Because two navigable rivers in Montana flow through areas with major oil and gas resources, the department has conducted numerous riverbed studies to determine and document state ownership of land. This process allows the state to take a progressive position in issues involving substantial royalties.

In FY 2000, the state received \$168,272 in oil and gas revenues from leased riverbed tracts. Other mineral leasing activity provided \$1,586 from riverbed tracts.

This same ownership review process is also becoming increasingly important in areas where surface development and/or use encounters beds, islands, and abandoned channels of navigable rivers. The department continues to work with state, federal, and private entities whenever ownership issues arise.

McDonald Mine Proposal

In November 1994, the Seven-Up Pete Joint Venture (SUPJV) submitted a mine operation and reclamation plan to the Montana Department of Environmental Quality (DEQ) and DNRC for review. The proposed open-pit gold mine was to be located near the town of Lincoln in Lewis and Clark County and included both private and state school trust lands. Preparation of a joint environmental impact statement (EIS) then commenced, with DEQ, DNRC, and the U.S. Army Corps of Engineers serving as the co-lead agencies.

In July 1998, DEQ issued a stop-work order on the preparation of the EIS because SUPJV had not paid invoiced amounts due. SUPJV subsequently brought its EIS account current with DEQ, but did not fund any further EIS work. In September 1998, DNRC advised SUPJV that the remaining primary term of the mineral leases had resumed running because no EIS review work was taking place. DNRC further advised that, unless the EIS review process recommenced, the state mineral leases would expire when their remaining primary terms ran out in February 2000. In October 1998, SUPJV filed suit against DNRC, asserting that the leases would not expire. SUPJV subsequently withdrew that lawsuit.

In November 1998, a state initiative (I-137) passed that prohibits new open-pit mines that utilize cyanide heap leaching.

In July 1999, mine opponents filed suit against the State Land Board and DNRC, seeking a judicial determination that the mineral leases had already expired. In February 2000, DNRC notified SUPJV that the state school trust mineral leases had now reached the end of their primary term and expired. SUPJV filed an administrative appeal. The mine opponents' lawsuit has been placed on hold by the court, pending the outcome of SUPJV's appeal.

SUPJV has also filed a lawsuit against the State of Montana alleging that I-137 constitutes a taking of property rights held by SUPJV. DNRC expects that litigation will continue in FY 2001.

Special Use Management

The Special Use Management Bureau administers all activities on lands classified as "other" and all secondary activities on lands classified as grazing, agriculture, or timber. Recreational use is considered a special use. The bureau's responsibilities include conducting the real estate functions associated with management of 5.1 million acres, including sales, exchanges, and grants and acquisitions of rights-of-way. The bureau is responsible for the commercial use of state trust lands, including developing new leases and administering existing leases. The bureau coordinates the issuance of land use licenses for shorter-term uses of state trust lands.

The sources of FY 2000 special use revenue are summarized in Table 30, and each is shown as a percentage of the total special use revenue in Figure 31. Income from special uses over the last five years is illustrated in Figure 32.

Table 30
Special Use Revenues in Fiscal Year 2000

Cabinsite and homesite leasing (773 agreements)	\$ 718,290
Easements	279,014
Special use leases and licenses	609,193
Recreational use	480,688
Land sales	<u>261,884</u>
TOTAL	\$2,349,069¹
1. For FY 2000, the program also realized an additional \$135,651 in non-trust land transactions for other agencies.	

Figure 31. Special Use Revenue by Source in FY 2000

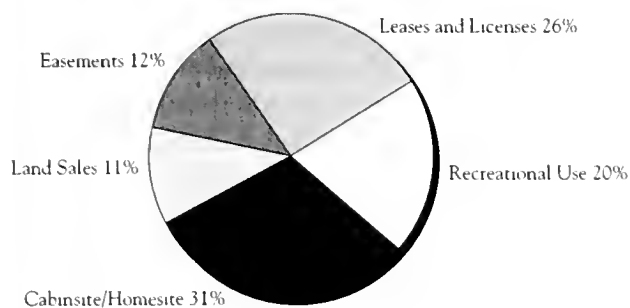
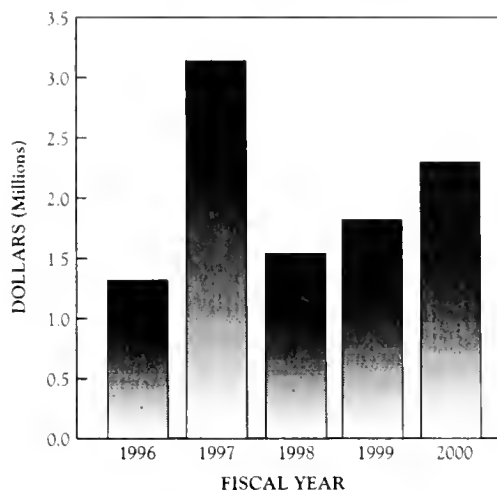


Figure 32. Special Use Revenues since FY 1996



Leasing/Licensing

Interest in special uses of state trust lands has greatly increased in recent years and is expected to continue into the future. The department issued 10 new leases and 94 new licenses in FY 2000. The program is actively developing tracts of land with high potential for commercial leases in Great Falls, Bozeman, and Kalispell. Establishment of new leases and licenses for a multitude of special uses holds great promise for increased revenue to the trusts.

Lewis and Clark Subdivision—Bozeman

The bureau received preliminary plat approval for the development of an eight-lot commercial subdivision located on 33 acres between the 7th and 17th Street Interchanges in Bozeman. Crop production on this parcel previously produced \$1,000 annual income. It is anticipated that the leases of the eight commercial lots will produce over \$100,000 annually. A lease agreement has been completed for the first tenant to locate a state office building on this site.

Swan River Retreat

The bureau completed a lease agreement with Cornerstone, Inc., for use of the former Swan River Correctional Facility as a residential treatment center for troubled youth. This lease makes use of the existing infrastructure, provides jobs for the community, and produces \$75,000 annually for the school trust.

Section 36—Kalispell

The bureau completed a neighborhood plan and master plan amendment to guide the development of a 600-acre parcel of land located immediately north of Kalispell. The department is currently evaluating a proposed "high tech" industrial park for use of a portion of this parcel.

In all cases, state trust land development is conducted in compliance with all local planning and zoning regulation.

Exchanges

The department reviews and processes land exchanges for the State Land Board under a land exchange policy that was developed a few years ago. Land exchanges are analyzed using the following base criteria:

- Equal or greater land value
- Similar navigable lake or stream values
- Equal or greater income to the school trust
- Equal or greater acreage
- Consolidation of state trust lands
- Potential for long-term appreciation
- Improved or equal access to state or public lands

In FY 2000, the bureau received 4 new applications and worked on various phases of review of 10 existing applications. Of these applications, 3 land exchanges that did not meet the criteria outlined in the policy were denied. Two land exchanges were completed in FY 2000. Other private and local government proposals are under review.

Crow Land Exchange

On November 2, 1994, the Crow Boundary Settlement Act was signed into federal law. The law includes a provision that, as part of the settlement, the Crow Tribe is entitled to the value of 46,625 acres of state land located within the Crow Reservation as a result of the Crow Allotment Act of 1920. The first priority for returning this value of land to the Tribe is for the Secretary of the U.S. Department of the Interior to negotiate with the State of Montana for the exchange of those remaining state trust lands (approximately 34,000 acres) within the reservation for public domain lands outside the reservation and administered by the U.S. Bureau of Land Management (BLM). Most of the state trust lands involved are currently leased by non-tribal lessees who have expressed concern over the possible change in ownership of these lands.

The exchange is divided into three phases that involve school trust lands. The first two phases of the exchange were approved by the State Land Board at the June 1999 meeting and have been completed. These exchanges transferred 12,455.32 acres to the Crow Tribe in exchange for BLM lands of equivalent value in Beaverhead County and in several counties in southeastern Montana.

For the third phase of the exchange, appraisals and environmental studies for approximately 20,860 acres of state land remaining on the reservation were completed in August 2000. Following public hearings in September 2000, the phase three exchange will be presented for final approval by the State Land Board at the November 2000 meeting. Approximately 21,560 acres of BLM land in northeastern, central, and southeastern Montana will be acquired by the state in the third exchange, if the exchange is approved. Because BLM has to wait for an appeals process following the State Land Board decision, the actual exchange of deeds will not occur until February 2001.

Mead Land Exchange

The bureau completed a three-way exchange involving trust land, lands held by the Montana Department of Transportation, and private land. The bureau exchanged 104 acres of common school and MSU—Second Grant trust land located west of Alberton and received two commercial lots within the City of Missoula. The lands disposed earned approximately \$100 annually, and it is expected that commercial leases of the acquired lots will earn over \$25,000 annually. In addition, access rights were acquired for timber management and recreational use of other state lands. The bureau anticipates a continuing exchange program with the Montana Department of Transportation.

Land Sales

The bureau conducted four competitive auctions, which resulted in 18 land sales in FY 2000.

- The department entered into a marketing contract with a Billings area realtor to sell 18 residential lots that were developed in the 1980s. Fourteen lots sold at auction, bringing in \$220,784 for the trust. Four lots are still available for sale.
- The bureau sold a 0.20-acre parcel of land on the Clearwater River outlet through competitive auction for \$41,100.

Non-Trust Land Transactions

- On behalf of the Montana Department of Labor and Industry, the bureau sold the former Butte Job Service and Havre Job Service buildings for \$80,501 and \$42,050, respectively.
- Under the law governing disposition of former institutions (MCA 77-2-302), the bureau sold the abandoned South Boulder Campus of the Montana Developmental Center for \$13,100 and the county's assumption of liability associated with the property.

Land Transfers

The 1995 Legislature passed MCA 77-2-351, which allows the state to transfer non-trust state land to a local governmental entity in return for a commitment that the property be used for a continuing public purpose. In FY 2000, the bureau transferred a 30-acre parcel to the City of Lewistown and a 29-acre parcel to the City of Columbus, both for public park purposes. Additionally, a one-acre lot was transferred to the City of Poplar for low income housing. Easement fees for a bridge were waived for the City of Kalispell under the authority established by this law. Several additional land transfers under this statute are pending.

Recreational Use

The program, established by House Bill 778 during the 1991 legislative session, is in its ninth year of development. Legally accessible state trust lands may be used for recreational activities by persons who hold state land recreational use licenses,

provided the lands are not closed or restricted for such use by rule or by the department. The type of license required depends on the type of activity conducted. Licenses for “general” recreational use — which, with a few exceptions, includes most forms of noncommercial and nonconcentrated recreational activities — can be purchased from all Montana Department of Fish, Wildlife and Parks license agents and DNRC area offices. “Special” recreational use licenses, which are available only from DNRC area offices, are required for concentrated recreational use conducted by groups or organizations, or for commercial activities such as outfitting. In FY 2000, 36,601 general recreational use licenses and 175 special recreational use licenses were sold.

Rights-of-Way

The bureau is responsible for reviewing and processing applications for rights-of-way and easements across surface lands and navigable waterways administered by the state. Rights-of-way are most commonly sought for utility lines, pipelines, and roads. Applications for private driveways have been increasing steadily over the past few years. This increase has lead DNRC and the State Land Board to develop a policy establishing criteria for review of these requests. The critical components of this private driveway policy evaluate the impact on the value of state trust land and the ability of state trust land to produce revenue. The policy also establishes a 30-year term for private driveway easements.

In FY 2000, approximately 131 new applications and 15 assignment requests were processed. One hundred and eleven applications were presented to the State Land Board. Thirteen emergency construction licenses were issued during the year. Revenue for rights-of-way in FY 2000 totaled \$279,014.

Reciprocal Access

The department is actively pursuing acquisition of access to isolated school trust lands to facilitate management and provide increased revenue to the trusts. Ten reciprocal access agreements were reached in FY 2000, resulting in permanent easements to 19,115 acres of state trust land. The department granted easements for 19.89 miles of roads on state trust land and acquired 54.28 miles of easements on private and national forest system roads. The 1999 Legislature granted the department authority to expand the reciprocal access program to all classifications of state trust lands.

WATER RESOURCES DIVISION



WATER RESOURCES DIVISION

Providing the most benefit, through the best use, of the state's water resources for the people of Montana.

The Montana Constitution affirms that the state's water resources are owned by the State of Montana and are to be used by its people. DNRC has the statutory responsibility to ensure that the state's water resources are managed to meet the existing and future needs of its citizens.

The Water Resources Division (WRD) is comprised of four bureaus — the State Water Projects, Water Management, Water Operations, and Water Rights Bureaus — and eight regional offices. The division employs approximately 115 persons with staff members stationed in Helena's central office and in the regional offices, which are located in Billings, Bozeman, Glasgow, Havre, Helena, Kalispell, Lewistown, and Missoula.

Further information about the division and Montana water resources can be found on the division's web site at:

www.dnrc.state.mt.us/wrd/home.htm

State Water Projects

The State Water Projects Bureau administers the operation, management, and rehabilitation of the state-owned dams, canals, and hydropower projects listed in Table 31, which are owned by DNRC, and Table 32, which are owned by the Department of Fish, Wildlife and Parks (DFWP). Local water users associations that market the water for irrigation and other purposes operate most of the projects. Debt repayment is derived from repayment contracts with water users and from leases of lands associated with the projects (see Table 33). The bureau ensures that the projects are operated and maintained in a safe, efficient manner and that repayment contracts are properly administered.

Table 31
Dams Managed by the State Water Projects Bureau
and Owned by DNRC

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard ¹	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ackley	1938	5,975	Yes	Yes	Yes	Judith Basin
Bair	1939	7,029	Yes	Yes	Yes	Meagher
Broadwater-Missouri (Toston)	1940	3,000	Yes	No	Yes	Broadwater
Cataract	1959	1,478	Yes	Yes	Yes	Madison
Cooney	1937	28,140	Yes	Yes	Yes	Carbon
Cottonwood	1953	1,900	Yes	Yes	Yes	Park
Deadman's Basin Dam and Dike	1941	76,900	Yes	Yes	Yes	Wheatland

1. A "high hazard" dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Continued on page 104

Table 31
Dams Managed by the State Water Projects Bureau
and Owned by DNRC (Continued from page 103)

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard ¹	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
East Fork of Rock Creek (Flint Creek)	1938	16,040	Yes	No	Yes	Granite
Fred Burr	1948	516	No	No	Yes	Ravalli
Frenchman	1952	3,752	No	No	Yes	Phillips
Glacier (two dams)	1937	4,200	Yes	No	Yes	Carbon
Martinsdale (two dams)	1939	23,080	Yes	Yes	Yes	Wheatland
Middle Creek (Hyalite)	1951	10,184	Yes	Yes	Yes	Gallatin
Nevada Creek	1938	12,640	Yes	Yes	Yes	Powell
Nilan (two dams)	1951	10,092	Yes	Yes	Yes	Lewis and Clark
North Fork Smith River	1936	11,500	Yes	Yes	Yes	Meagher
Painted Rocks	1940	32,362	Yes	Yes	Yes	Ravalli
Ruby	1939	38,850	Yes	Yes	Yes	Madison
Tongue	1939	79,071	Yes	Yes	Yes	Big Horn
Willow Creek	1938	18,000	Yes	Yes	Yes	Madison
Yellowwater Dam and Dike	1938	3,840	Yes	Yes	Yes	Petroleum

1. A "high hazard" dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Table 32
Dams Managed by the State Water Projects Bureau
and Owned by DFWP

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard ¹	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ashley Lake	Unknown	20,400	No	No	Yes	Flathead
Bearpaw	1958	535	Yes	Yes	Yes	Hill
Clearwater Fish Barrier (Lake Inez)	1963	>50	No	No	No	Missoula
Gartside	1962	326	Yes	Yes	Yes	Richland
Johnson	1930s	208	No	No	Yes	Hill
Knowlton	1890	166	No	No	Yes	Teton
Park Lake	1872	225	Yes	Yes	Yes	Jefferson
Rainy Lake Fish Barrier	Unknown	>50	No	No	No	Missoula
South Sandstone	1975	940	No	No	Yes	Fallon
Whitetail	1930s	198	No	No	Yes	Daniels

1. A "high hazard" dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Table 33
Leases Associated with DNRC-Owned Water Projects

Lease Type	Number of Leases	Annual Revenues
Cabin Site	26	\$4,268
Grazing	5	4,630
Right-of-Way	1	42
TOTAL	32	\$8,940

Project Rehabilitation

The Project Rehabilitation Program identifies and corrects safety and operational deficiencies on state-owned projects. Projects rehabilitated or partially rehabilitated during FY 2000 include the Tongue River Dam, located in southeastern Montana, and Nilan East Dam, located west of Great Falls near Augusta, Montana.

Tongue River Dam

The Tongue River Project resulted in the rehabilitation, repair, and enlargement of the Tongue River Dam; partial fulfillment of the Northern Cheyenne Indian Reserved Water Rights Settlement Act; and the conservation, development, and enhancement of fish and wildlife resources and habitat in the Tongue River basin. The project is a partnership involving the State of Montana, U.S. Bureau of Reclamation, and Northern Cheyenne Tribe. An official dedication ceremony was held onsite on July 1, 1999, with Governor Marc Racicot serving as the keynote speaker. The dam project was completed on July 31, 1999. Management of the dam was turned over to the Tongue River Water Users Association on August 1, 1999. Warranty work on various project components began in the fall of 2000.

Work was completed on an alluvial dike on the west shoreline of the Tongue River Reservoir on May 15, 2000. The 1,200-foot long structure was constructed to reduce water seepage into the North Extension of the Decker Coal Mine, located west of the reservoir. The increased seepage was the result of the increased reservoir level. Last spring as the reservoir was filling, uncontrolled seepage into the North Extension increased to 18,000 gallons per minute and created a public safety hazard due to severe headcutting that occurred at the east end of the open coal pit. This seepage far exceeded the anticipated flow rates and was beyond the water-pumping capability of Decker Coal. With the dike in place, seepage into the North Extension has been reduced to approximately 6,000 gallons per minute, well within Decker's pumping capabilities. The total cost of the dike was \$238,963, plus Decker's cost for surveying and testing. This was \$115,000 lower than originally estimated. The cost will be shared between the Tongue River Project sponsors and Decker Coal. Decker Coal Company used its own equipment and crews to construct the dike. The dike will remain in place until mining activity in this area ends in approximately 10 years.

In addition to the alluvial dike, Decker Coal constructed embankments against the headwall of the interior pit, also located west of the reservoir. The interior pit also experienced excessive, uncontrolled seepage during the first filling of the reservoir to the new, higher full pool. With the new embankments in place, the

seepage into the current active interior pit has been reduced to a level where no pumping is necessary.

On May 28, 2000, the lifting mechanism for the fixed wheel gate in the primary outlet failed during routine operations. The gate stems and connectors, steel supporting plate and beams, beam mounting pads, and hydraulic system were damaged as a result of this failure. Negotiations with the various contractors and the main project consultant are ongoing concerning the design and cost-sharing of the gate system repair.

The total cost of the Tongue River Project was \$46.3 million. This amount was cost-shared between the State of Montana and the federal government. The State Water Projects Bureau contributed engineering design review and project oversight for the Tongue River Project in FY 2000. The status of all project components is shown in Table 34.

Table 34
Status of Tongue River Project Components

Phase	Component	Comments/Status	Outlook
Phase I	Roads, aggregate, and site preparation	Completed	Not applicable
Phase II	Roller-compacted concrete emergency spillway	Completed	Not applicable
Phase II	Fish and wildlife enhancement	State-sponsored enhancement projects that are completed include a fish screen at the T&Y irrigation diversion, a conservation easement on the Hirsch Ranch, the Badger Creek conservation easement, and an agreement to abandon the SH Canal headgate.	Fish and wildlife enhancement issues are still being negotiated.
Phase III	Primary spillway and outlet works	Completed on July 31, 1999.	Warranty work began in the fall of 2000. ¹
Phase III	State park and mitigation package	Completed. DNRC also transferred the Tongue River Project field office to DFWP as part of the mitigation package.	Not applicable

1. In a project as complex as the Tongue River Project, there are always aspects of the construction and work that do not meet specifications. The warranty work will address these "punch list" items. The project is completed from a legal standpoint and according to the contract. The warranty work is after the fact, after project completion tasks that DNRC has requested the various contractors to address.

Nilan East Dam

Repair of a second, additional depression was started on November 3, 1999, and was completed on December 21, 1999. The repairs consisted of removal of the existing native material, placement of a compacted base, installation of a geotextile and bentonite liner around the perimeter and bottom of the excavation, and then replacement and compaction of the native clay material. A compacted layer of sand and gravel was placed on top of the clay, and a geotextile liner was placed over the area. Riprap was then placed over the liner to protect the repairs from erosion. If left unrepaired, the depression could have caused failure of the dam. The cost of the repairs totaled approximately \$120,000, which was cost-shared between the Nilan Water Users Association and the department.

Bair Dam and Nevada Creek Dam Feasibility Studies

DNRC has contracted the feasibility studies of both of these dams. Site investigations and geotechnical drilling have been completed. Data collected from piezometers installed in drill holes are being used for seepage analyses of the dams. The cultural resources Class I inventory and report have been completed, and draft budget information has been received. Grant and loan applications were submitted to DNRC's Conservation and Resource Development Division in May 2000. Draft feasibility design alternatives and cost estimates are due in August 2000, with the final feasibility reports due on October 1, 2000. The design and cost estimate information and final feasibility report will be used to develop a proposal to the 2001 Legislature to fund these projects.

Deadman's Basin Project - Barber Canal

The third and final phase of the Barber Canal rehabilitation will be undertaken in the fall of 2000. The work will include the modification of the approach canal, the reshaping of the Barber Canal, the reconstruction of county road crossings, the replacement of an 80-foot drop structure, and the installation of a new highway crossing.

The project engineer was selected, and in March 2000 the low bidder was awarded the contract to perform the construction work. The rehabilitation will increase Barber Canal's flow capacity from 200 to 300 cubic feet per second (cfs). A Renewable Resource Loan in the amount of \$437,000 and a grant of \$75,000 were approved by the 1999 Legislature to fund the project. Owing to drought conditions, which have effected low reservoir levels, construction may begin as early as August 2000. The contract stipulates that the Barber Canal rehabilitation must be completed by May 1, 2001, so water deliveries can be resumed in time for the irrigation season.

Broadwater-Missouri Pipe Span Project

The 1999 Legislature approved a Renewable Resource Loan in the amount of \$509,000 to provide the Broadwater-Missouri Water Users Association with funding to rehabilitate the pipe that spans the Missouri River near Toston. The 7-foot-diameter, 666-foot-long pipe supplies irrigation water for 23,635 acres of wheat, barley, potatoes, and hay. During the winter of 2000, the eroding coal-tar lining was removed from the interior of the pipe and was replaced with a new zinc/aluminum, thermal-sprayed coating. The pipe span's expansion joint was rehabilitated

in the spring. State Water Projects Bureau staff was on-site and provided construction oversight throughout this phase of the project. In the fall of 2000, corrosion and blistering paint will be removed from the exterior of the pipe, and the pipe's surface will be repainted with a new aluminized overcoat. Also in the fall, the deteriorating walkway atop the pipe will be replaced, and the buried portion of the pipe will be cathodically protected against further corrosion.

An engineering consulting firm has been selected to develop construction plans and specifications for the project. Contracts will be let in the fall for the renovation of the pipe span's exterior surface.

Seepage Monitoring

Seepage monitoring programs are required as a condition of the operating permits for all of the regulated high hazard dams in Montana. A "high hazard" dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam. Of DNRC's 21 projects, 19 are classified as high hazard (see Table 31).

In May 2000, the bureau again applied for two \$100,000 grants from the Renewable Resource Grant and Loan Program for the installation of monitoring wells at DNRC's Painted Rocks, Cataract, Willow Creek, and Yellowwater Dams, and at DFWP's Park Lake, Gartside, and South Sandstone Dams.

Project Management

The Project Management Program administers the operation of the state-owned dams and oversees the repayment contracts with the water user associations. Additionally, the program protects water rights for the projects and oversees disposal of projects no longer appropriate for state ownership.

Project Disposition

The State of Montana originally became involved, many years ago, in various water conservation projects because there was a need for government to create employment opportunities and stabilize the agricultural economy. Governmental involvement in these projects no longer provides public benefits, and the projects are being transferred to water districts and private ownership. The listed activities were accomplished during FY 2000.

- The bureau released the Big Dry Project. The land was sold at a public auction in Jordan, Montana, on May 3, 2000.
- The bureau initiated the transfer of two easements associated with the Burgess Water Project, located in Richland County. An environmental assessment was completed for the transfer in June 1999. The Burgess Water Project will be transferred to the current landowners in the fall of 2000. No money was involved in the transfer.
- The bureau transferred ownership of the Brady and Highwood municipal water supply systems. No money was involved in the transfer.

- Preliminary file reviews, financial status determinations, title searches, and field reviews were performed on the Winnett and Bainville Projects.
- A preliminary file review was completed on the Red Butte Project, located in Fallon County. A title search and field review will be completed in the fall of 2000.

Water Measurement and Water Rights Activities

The State Water Projects Bureau is responsible for all activities required to protect, defend, and maintain water rights for all state-owned water projects.

In FY 2000, the bureau collected and recorded bimonthly reservoir storage data for 17 state-owned reservoirs. The bureau also operated and maintained 30 permanent stream- and canal-gauging stations associated with these state projects.

The bureau continues to monitor staff gauges on the four major tributaries immediately above Painted Rocks Reservoir. These gauges provide the inflow data needed to implement the *Operating Plan for Painted Rocks Reservoir* that was first developed and used in FY 1999.

In FY 2000, the bureau created a new Microsoft Access database for its project stream-gauging records and entered all historical records through FY 2000. Additionally, the bureau created a Microsoft Excel spreadsheet database for its historical reservoir storage data that were previously available only in hard copy files. All reservoir contents data from 1960 to the present were entered for the 17 state-owned reservoirs that the bureau monitors.

In 1996, the State Water Projects Bureau requested the Montana Water Court to modify and clarify its project water rights by consolidating its claims, which were originally filed for five uses (storage, irrigation, stock, domestic, and municipal), into claims for "Sale of Water" for those same purposes. The proposed clarification of purpose would allow the place of use for the water to be described in more general terms, i.e., as a general service area described by township, range, and county only. The proposed consolidation and clarification of DNRC's claims would not change the historical purpose of water use from the state projects, but only more accurately and concisely reflect that historical use. On March 9, 2000, the Montana Water Court filed its Master's Report on this case (Case No. 76HE-166). No exceptions to the Master's Report were filed, and the Order Adopting the Master's Report was filed by the Chief Water Judge on May 12, 2000. This judgment was favorable to the bureau as it recognizes the special status of the state water projects and the relationship between the department and the water users associations. The department will now amend all other water rights for its water projects under this same format, and resolve existing case files in other basins that have been pending the decision in this case.

In FY 2000 the State Water Projects Bureau continued settlement of unresolved objections to and case work on water rights for state water projects in various basins that are still in the preliminary stages of adjudication.

Administration of Project Lands and Leases

DNRC owns land surrounding state-owned reservoirs, supply canals, and water delivery canals. DNRC also assists DFWP in the operation and maintenance of 10 dams owned by DFWP. These lands are unique and are administered under a special set of statutes.

Funding was requested in FY 2000 to repair a slump at DFWP's Bearpaw Dam in Hill County. The slump occurred in the summer of 1998 and is located immediately to the west of the spillway. It could threaten the integrity of the spillway if left unrepaired. The proposed repair would remove 3,500 cubic yards of material from the slope, establish a new 2:1 slope, and place the material at two fill locations located a short distance from the dam.

Noxious weed control is an ongoing problem at almost all of the department's projects. The six-year Noxious Weed Plans, which were developed in FY 1997, are still in effect and were being implemented in FY 2000. All weed control costs are borne by the water user associations.

Hydropower

The hydropower program administers the development and operation of hydropower facilities on state-owned water projects. To date, one hydropower facility, the Broadwater Power Project near Toston, has been built. With a maximum capacity of 10 megawatts, the project began generating power in June 1989.

DNRC owns and operates the facility and contracts with Montana Power Company (MPC) to sell the energy. Earned revenues are used to pay for rehabilitating other state-owned water projects. In an average year, the facility is capable of generating roughly 56 million kilowatt-hours of electricity. Earned revenue is calculated by applying the rates established in the Power Purchase Agreement; these rates escalate annually.

During the past year, the hydropower staff worked on several special projects. A new programmable logic controller was installed for regulating spillway flows, which will improve the facility's ability to match outflow to inflow. A structural wall separating the canal intake from the influences of the turbine intake was built in the spring. The structure will reduce impacts to canal diversions and allow the plant to operate at higher power-generating levels during spring runoff.

Also, the staff contributed additional support in fine tuning the emergency warning system at the East Fork Dam in Granite County.

The department, along with other state agencies and consumer organizations, intervened in the utility restructuring process before the Public Service Commission. The department is concerned about potential impacts of restructuring on future revenue from the Broadwater Power Project, which is presently committed to paying off development bonds and rehabilitating water projects such as the Tongue River Dam.

Generally, Missouri River flows at the Toston Dam from July 1999 through June 2000 were below average. Annual maintenance was performed in August 1999, requiring about 98 hours of downtime. For the remainder of the year, downtime

was minimal. Statistics concerning the Broadwater Power Project during FY 2000 are shown in Table 35.

Table 35
Broadwater-Missouri Power Project in FY 2000¹

Operating availability	98 percent
Gross energy generation	55,446,051 kilowatt-hours
Gross revenue from sales	\$ 3,131,318
Investment income	207,019
Operating costs	(355,906)
Bond payments	(2,025,321)
Net Revenue	\$ 957,110

1. Note: Some fiscal year-end numbers were unavailable. The table's figures include some estimates.

Water Management

The Water Management Bureau (WMB) provides educational, technical, and other types of support in (1) solving statewide water resource issues and policy concerns, (2) protecting Montana's interests in regional and international river basins, and (3) assisting local watershed and user groups solve water management issues and problems. WMB staff also provides technical support to other DNRC bureaus, the Reserved Water Rights Compact Commission, and water user groups.

Watershed Management

WMB staff worked in the following watersheds in FY 2000:

Big Hole River	North Fork of the Blackfoot River
Bitterroot River	Rock Creek, tributary of the
Blackfoot River	Clarks Fork Yellowstone
Clark Fork River	Ruby River
Flathead River	Shields River
Milk River	Smith River
Missouri River	Sun River
Nevada Creek	TenMile Creek
	Yellowstone River

Examples of WMB watershed activities are described below.

Big Hole River

WMB staff provided technical support to the Big Hole Watershed Committee. Staff gathered hydrologic information for the second consecutive year to understand the effect that irrigation has on river flows throughout the year. The study is being completed in cooperation with the U.S. Bureau of Reclamation (USBR)

and the Montana Bureau of Mines and Geology. Two other investigations were initiated in the spring of 1999 and continued this year. One is assessing the amount of water that could be stored in the proposed Twin Lakes storage site, and the other is determining whether this stored water could be released into Big Lake Creek to benefit flows in the Big Hole River during times of drought.

Bitterroot River

WMB provided staff support and technical assistance to the Bitterroot Water Forum. Staff helped the forum and Ravalli County implement a 319 grant from the Department of Environmental Quality to examine the stability of the Bitterroot River channel. DNRC also helped the forum and Bitterroot Conservation District obtain a Watershed Assistance Grant to conduct an outreach program on total maximum daily loads (TMDLs) and subbasin watershed planning.

WMB staff helped the forum establish a Bitterroot basin closure, create a water education series, initiate watershed restoration work in a number of tributary watersheds, begin a land stewardship education series, and continue to build a GIS database of the watershed that identifies irrigated lands and diversion ditches. For example, staff helped organize and present two water right workshops for over 400 interested parties, one water conservation workshop, one three-day wetland education training session, and one public forum on future water supplies and the effects of downstream hydropower water rights.

Blackfoot River

WMB staff assisted the Blackfoot Challenge and local irrigators in developing and implementing a drought mitigation plan for the Blackfoot and Clearwater rivers in the dry summer of 2000. A number of stream gauges were established and monitored during June through August.

Clark Fork River

WMB provided staff support to the Upper Clark Fork Steering Committee. In addition to providing general technical support, staff began investigating ways to better manage the relationship between surface water and groundwater and to assist with the TMDL process. Three pilot watersheds — Raced Track, Upper Rock, and Fred Burr creeks — are being assessed for TMDLs. WMB also helped the steering committee evaluate the DFWP dewatered stream list and prioritize those streams that needed immediate improved projects. With this information, the committee applied for and received a watershed assistance grant to develop drought mitigation plans for these streams. WMB continued to provide secretarial support to the Upper Clark Fork Steering Committee by recording and preparing minutes of monthly meetings.

Flathead River

WMB staff served on the Flathead Basin Commission, helped the commission coordinate international activities with British Columbia, and assisted the TMDL technical committee. Staff wrote the TMDL Renewable Resource Grant application for funds that are being used to reduce pollution into Flathead Lake. The TMDL project, called the *Voluntary Nutrient Reduction Strategy*, has a goal to use

education, technical assistance, and demonstration projects to convince and help residents mitigate non-point sources of pollution into Flathead Lake and upstream tributaries. WMB hired a contractor to prepare and finalize a TMDL implementation plan that must be acceptable to DEQ, EPA, and the Confederated Salish and Kootenai Tribes. Staff is also providing technical assistance in the development and implementation of a wetland/riparian assessment and restoration plan for the Ashley Creek Watershed.

Milk River

WMB and Glasgow Regional Office staffs are working with USBR, local irrigation districts, and other users to solve water management and distribution issues within the Milk River basin. A three-year grant has been received from USBR to help the eight irrigation districts (organized into three divisions) better understand how water is managed within the drainage, to learn about more efficient water conservation practices, and to assist the local irrigation districts develop water conservation plans. One conservation plan was completed in 2000.

Four quarterly *Milk River Watershed* newsletters were published and mailed to over 1,300 water users in the Milk River basin. WMB and the Glasgow Regional Office obtained the articles, and WMB staff edited, published, and mailed the newsletter.

WMB obtained additional funding from USBR to help the Reserved Water Rights Compact Commission create a GIS water right and water use database for the Milk River. Additional monies were obtained to place ArcView software, the Milk River water right database, and computers into the three Milk River irrigation division offices. DNRC is helping the irrigation districts use the software and database to improve basin-wide water management. WMB staff continued to provide assistance to the Reserved Water Rights Compact Commission on the development of a negotiated compact on the reserved water rights of the Fort Belknap Tribes.

The Milk River International Alliance is a grass roots organization of water users from Montana, Alberta, and Saskatchewan and local, state, and federal governmental officials. Formed in March 1999, it has a goal of providing education, technical assistance, and coordination in improving the management of water supplies within the Milk River basin. WMB staff continued to provide administrative, facilitative, and technical support to the group.

Missouri River

WMB provided staff support to the Fort Peck Advisory Council in its efforts to respond to Missouri River issues that could impact Fort Peck Reservoir and to develop more recreational opportunities around Fort Peck Reservoir.

Nevada Creek

WMB staff continued to measure sediment, inflows, and releases from Nevada Creek Reservoir. In the fall of 1998 and spring of 1999, WMB staff installed sampler intakes and automatic suspended-sediment samplers near the stream-gauging stations above and below the reservoir. Samples are being taken daily (or more frequently) from May through October and will be analyzed to determine the effects of the reservoir on sediment loads in Nevada Creek.

North Fork of the Blackfoot River

WMB staff is in the final year of a water conservation study on the North Fork of the Blackfoot River for local water users and the Blackfoot Challenge. The study began in the spring of 1997 and was funded with grant funds from USBR. The U.S. Geological Survey (USGS), USBR, and WMB cooperated on the investigation. A corollary study was initiated in the spring of 2000 by a Montana Bureau of Mines and Geology graduate student to understand the relationship between groundwater and the North Fork of the Blackfoot River. WMB is funding and overseeing this investigation.

Rock Creek, Tributary of the Clarks Fork Yellowstone

WMB staff collected streamflow data from five stream-gauging stations on Rock Creek. WMB will analyze these data to help water users better manage water supplies in Rock Creek and releases from Cooney Dam.

Ruby River

WMB staff continued to assist the Ruby River water users in implementing and refining a dewatering prevention plan for the Ruby River. WMB installed four streamflow gauges for the water users and oversees their operation and maintenance.

Shields River

For the second year, WMB staff is helping the Shields River Watershed Group assess the potential for improving water use efficiency in the basin and examining the potential for storage. WMB established measuring devices on irrigation diversions and on the river and continued to collect data during the irrigation season. Outside funding was obtained from USBR to purchase and install the measuring devices.

Smith River

WMB staff was requested by the local conservation districts and the U.S. Natural Resources Conservation Service (NRCS) to determine the effects of irrigation in the upper reaches of the Smith River on downstream river flows and the effects of converting flood irrigation to sprinkler irrigation on downstream water supplies. The staff designed and implemented the study, which consisted of monitoring groundwater, natural flows into and out of the basin, and the major irrigation diversions. Staff collected data during the spring and summer of 2000. Staff obtained approval from Meagher County CD and local water users before proceeding with the investigation.

Sun River

WMB staff continued to collect streamflow data from Elk Creek for the Sun River Watershed Group. The group has requested additional assistance in conducting a hydrologic water balance analysis of the Sun River basin. Staff installed four new stream-gauging stations this spring and is now operating six gauges in the basin.

Tenmile Creek

WMB is in its fifth year of providing staff support and facilitation to the Upper Tenmile Watershed Steering Group. The group continues to work to resolve issues related to streamflows, riparian habitat, and water quality. In 2000, WMB wrote two grants and coordinated the completion of the third riparian restoration project with funding from DFWP and Wal-Mart. Over 10,000 trees and shrubs were planted in the riparian corridor, with the labor services provided by the Montana Conservation Corps.

WMB staff also obtained an EPA grant in 1999 for monitoring changes in water quality during ongoing large-scale Superfund cleanup of four abandoned mine complexes in the basin. The hydrologic characterization of water quality and streamflow attributes, which was started in 1997 by USGS and the Lewis and Clark County Water Quality Protection District, has been completed, and the final report will be released in September. The EPA Superfund cleanup is currently in its second season and is removing mine waste from contact with streamflow on private lands in the Town of Rimini. The U.S. Forest Service has contracted road improvements needed to move forward with the removal of mine waste from the Minnehaha Creek drainage of the watershed.

Yellowstone River

WMB staff provided support to the Governor's Upper Yellowstone River Task Force. Activities included serving on the task force's technical advisory committee, providing liaison with state and federal agencies, writing and monitoring grants, and responding to information requests from the task force.

A \$300,000 Resource Development Grant and other funds are being used to develop components of a cumulative effects investigation that will examine effects of bank stabilization on riparian vegetation and fish and wildlife habitat. WMB staff is directing the cumulative impact assessment on channel geomorphology with assistance from the Water Resource Division of USGS (Montana Office), the Biological Resource Division of USGS (Fort Collins), the University of Montana School of Forestry, and the U.S. Fish and Wildlife Service. The work is being conducted cooperatively with the U.S. Army Corps of Engineers and other state and federal agencies with regulatory authority. A technical advisory committee of the task force oversees the work.

WMB staff is also assisting both the Yellowstone River Council (a group of 12 conservation districts) and the Yellowstone River Conservation Forum (a group of 23 conservation groups) with issues on the middle and lower Yellowstone River. Staff wrote grant applications and provided other types of assistance as directed by the council and forum.

WMB staff continued the 10-year review of the Yellowstone River basin water reservation objectives, as required by statute.

Protection of Montana's Water

DNRC has statutory responsibility to protect Montana's water resources in interstate and international water allocation and management proceedings and decisions. A description of DNRC activities in protecting Montana's water during FY 2000 follows.

Columbia River

As necessary, WMB staff provided advice and assistance to DNRC officials, the Northwest Power Planning Council, the Flathead Basin Commission, and the Governor's Office on issues affecting the operation and management of the Columbia River system in Montana.

Lower Missouri River

WMB staff represented Montana on the Missouri River Basin Association's technical committee that reviews and recommends options for annual operation of the Missouri River main stem system, as well as alternatives for revising the *Missouri River Master Manual*. Staff analyzed impacts of operation plans on Fort Peck Reservoir and the lower Missouri River.

Milk River

WMB staff met twice with Alberta Environment, Environment Canada, USGS, and USBR on the letter of intent to better utilize surplus waters of the St. Mary and Milk rivers. The letter of intent is being modified to provide Montana with benefits comparable to those provided to Alberta. Other issues that are being considered include water quality and ways to improve the accuracy of the international apportionment.

North Fork of the Flathead River

WMB staff continued to coordinate communications between British Columbia and the Flathead Basin Commission to protect the state's interests in the North Fork of the Flathead River drainage. WMB staff monitored river flows and water quality at the international gauge on the North Fork of the Flathead River. WMB staff is also working with a coalition of groups within Montana, Alberta, and British Columbia on improving the use and protection of the North Fork River and watershed.

Poplar River

WMB staff continued to coordinate with Saskatchewan Water Corporation regarding the annual release of water from Cookson Reservoir into the East Fork of the Poplar River, in accordance with the International Joint Commission's recommended apportionment. Staff worked with USGS to ensure that Montana receives its rightful share.

Protection and Use of Montana's Groundwater

Examples of WMB's groundwater protection and use activities that occurred in FY 2000 are described below.

WMB staff defined the parameters and controls for establishing the Coal Bed Methane Controlled Groundwater Area in the Powder River basin of southeastern Montana. A technical advisory committee chaired by a WMB staff member has been set up to oversee monitoring and the collection of baseline data as a part of

the controlled groundwater area. The staff also works with a group of federal and state agencies that are monitoring the potential impacts of coal bed methane gas development on water quality and the aquifers affected.

WMB staff continued to assist in implementing the Medicine Lake Groundwater Study in Sheridan County and to assist Sheridan County Conservation District in managing its groundwater reservation.

WMB staff worked with the water resources regional offices in reviewing and analyzing groundwater rights, permit applications, and water right complaints and assisted with water monitoring within the Yellowstone National Park Controlled Groundwater Area. A WMB staff person chaired the Yellowstone National Park Technical Oversight Committee and is a member of the Groundwater Assessment Steering Committee.

WMB completed a groundwater investigation on a terrace gravel aquifer just west of Red Lodge. Parts of this area, which have historically been irrigated, were recently subdivided and taken out of irrigation. Many residents and businesses located on the terrace depend on relatively shallow groundwater in the terrace gravels. The aquifer still receives much of its annual recharge from leaking irrigation ditches and irrigated lands. While there appear to be no immediate concerns in the area, there is a potential for problems to develop if irrigation activities continue to diminish. WMB developed recommendations for the area.

Water Resource Education

WMB provides water resource education to water users and other water interests across the state. The goal is to provide citizens with the tools and knowledge to solve their own watershed and water resource problems. Specific activities in FY 2000 include the following.

WMB developed and conducted three basic water right workshops for the public (two in the Bitterroot and one in the Flathead which had 540 attendees) and one for state and federal natural resource agencies.

WMB staff provided a training session to water users and water commissioners in Lewis and Clark and Broadwater Counties on how to measure and distribute water in accordance with Montana water law.

WMB staff at the Montana Watercourse supervised the multiple activities of three full-time water education specialists at Montana State University: the Project WET Montana Coordinator, the Montana Volunteer Water Monitoring Coordinator, and the Montana Wetlands Education Coordinator. In addition, WMB staff at the Montana Watercourse completed the following activities.

- Blackfoot Watershed Tour (July 1999). Montana Watercourse collaborated with the Blackfoot Challenge to conduct a second educational tour for area teachers. Approximately 20 teachers from Lincoln, Helmville, and Seeley Lake participated in the tour. The course included field experiences addressing multidisciplinary topics: the Native American presence in the Blackfoot, forest vegetation and harvest practices, ornithology of the Seeley Lake area, water rights, and water supply issues. The teachers receive university credit for this field experience.

- Watershed Coordinator Retreat (September 1999). Montana Watercourse staff sponsored and facilitated a retreat for watershed coordinators in Montana. Twenty-nine people attended, including 11 state and federal water managers. The purpose of the gathering was to create an opportunity for those involved in watershed coordination to share their experiences and learn from one another. Participants recommended that it become an annual event.
- Montana Watershed Coordination Council. Staff of the Montana Watercourse continue to be active participants on the Coordination Council. This year the level of involvement increased to include a two-year commitment to chair the council. In this capacity, staff provide coordination, communication, and leadership that includes long-range planning, development of biannual plans of work, correspondence, and biannual reports. Staff also participate in three work groups: the Agenda Committee, Watershed Recognition Work Group, and Water Activities Work Group. Products generated by involvement in these groups include quarterly meeting agendas for the council, revised work plans for the council, selection of the winners of the Montana Watershed Stewardship Award 2000, and the 319 Grant review process.
- Kalispell Water Rights Workshop (January 2000). Montana Watercourse staff made a presentation titled "A Thumbnail Sketch of the History of Water Rights in Montana."
- Rocky Mountain Watershed Coordinators' Roundtable (May 2000). Staff wrote an application for a grant that provided for the facilitation and coordination of a Rocky Mountain Watershed Coordinators' Roundtable. Participants included watershed coordinators and state and federal water managers from Colorado, Wyoming, Utah, Montana, and North and South Dakota. The purpose of the meeting was to bring those involved in watershed management in this region together to learn from one another and develop a set of regional recommendations for the National Watershed Conference to be held in 2001. The participants learned about watershed coordination and identified funding as their priority need. A panel of federal representatives then responded to this expressed need by describing their existing resources and assistance and suggesting alternatives for the future. A focus group, facilitated by Montana Watercourse staff, was formed to continue the interstate dialogue into 2001. Participant evaluations suggested that the group reconvene.
- Bobtail Creek "Know Your Watershed" (May 2000). Staff facilitated a "Know Your Watershed" Workshop for residents of the Bobtail Creek watershed near Libby.
- Rocky Mountain Watershed Volunteer Monitoring Meeting (May 2000). Staff participated in the development workshop of the Rocky Mountain Watershed Volunteer Monitoring Network. The focus of the meeting was to develop a "study design and data interpretation" workshop that can be offered regionally for volunteer water monitors. A training plan was developed for 2000-2001 to guide continuing work on this multi-state process.

- Facilitation of Yellowstone River Stakeholder Collaboration Process (June 2000). With a Regional Geographic Initiative Grant from EPA, staff began providing facilitation assistance to stakeholder groups working in the Yellowstone watershed to plan a Yellowstone Watershed Roundtable in the fall of 2000.

Improvement of Statewide Water Management

WMB helps governments and local water users improve local water management. A number of those activities in FY 2000 are described below.

WMB staff was involved in discussions and negotiations with Avista (formerly Washington Water Power) on the relicensing by the Federal Energy Regulatory Commission (FERC) of the hydropower facility at Noxon Rapids and Cabinet Gorge. WMB is a member of Avista's Water Resources and Fisheries Working Groups and Management Committee. WMB tried to incorporate conditions into Avista's FERC license that are intended to improve overall water management in the basin and to protect existing junior water right users. WMB drafted a proposed temporary two-year basin closure on the issuance of new water use permits that was adopted by the 1999 Montana Legislature. The closure affects the Clark Fork River basin, including the Flathead River upstream of the Noxon Rapids hydropower facility. During the two-year moratorium on the issuance of new water rights, the state and Avista attempted to negotiate a mutually acceptable agreement. Even though the protection of junior water users by FERC was not accomplished, discussions are ongoing regarding basin closure in the Flathead Basin.

WMB staff has also been working with DEQ to ensure that the relicensing of Missouri River hydropower facilities by FERC will not impact other water users and interests in the basin. WMB submitted comments to FERC on how FERC addressed these concerns in its EIS. WMB staff continued to be a member of Montana Power Company's Water Quality Technical Oversight Committee.

WMB, in cooperation with other state and federal agencies, wrote a grant application to prepare "Water Resource Reference Documents." The documents would describe the evolution of Montana water law, federal law, water uses, instream flow needs, water quality issues, and other water-related issues affecting water management and use in Montana over the last century. If funded, the resource documents will reference the institutional framework, all the relevant technical studies and data, and significant activities that have occurred in the last 100 years, with emphasis on the last 25 years. These documents should help water managers in the 21st century understand where we have been and what work has been done.

WMB staff actively participated on the Montana Watershed Coordination Council. The goal of the council is to provide better coordination, technical assistance, funding, and educational information to local watershed groups throughout Montana so that they can do a better job of resolving water resource problems. One WMB staff member continued to be a member of the Agenda Committee, a member of the Watershed Activities Work Group that reviews 319 Grant applications, and chair of the Watershed Linking Work Group. Another member continued to be on the Administrative Work Group. Another was elected chair of the Watershed Coordination Council.

WMB staff supported and coordinated activities of the Governor's Drought Committee. Last year, the drought committee held seven meetings. The 2000 *Drought Status Report* was prepared and submitted to the governor in April. WMB provided staff support and worked closely with the Lt. Governor, who is the chair of the Governor's Drought Committee. The committee is responsible for implementing the *Montana Drought Response Plan*. The status report describes the potential for drought and, if appropriate, different response actions at the state and local level.

WMB staff prepared and distributed monthly water supply and moisture condition reports to local, state, and federal governments, statewide news media, and other interested parties. In addition, the severe conditions that prevailed over the state in the spring and summer of 2000 caused the staff to continually provide information about drought conditions and ways to mitigate drought impacts.

WMB staff worked closely on integration of water quality and quantity by reviewing non-point pollution discharge permits, commenting on EPA's draft 319 Rules, participating in DEQ's assessment of priority streams for listing as water-quality-impaired, and participating on the Water Pollution Control Advisory Board and on the Water Activities Committee, which advises DEQ on its Non-Point Discharge Elimination System Program.

Development of Drinking Water Supplies

WMB staff coordinated the state team that is trying to facilitate the planning and development of large regional water systems. The team is helping the North Central Montana Rural Water Supply System Coordinating Committee work through the regulatory processes and funding. The Chippewa Cree Tribe of the Rocky Boy's Reservation, a number of communities, and rural and municipal water associations are involved in the project. WMB oversees the expenditure of funds received from the 1999 Legislature for the necessary feasibility studies and assists with economic and financial aspects of the project.

WMB staff represented the division in monitoring development of the Dry Prairie Rural Water Supply Project, which is located in the northeastern corner of the state.

Other Important Water Management Activities

WMB staff continued to assess the effects of deregulation on the operation of the Toston hydropower facility and offers for the purchase of the Power Purchase Agreement with Montana Power Company. Staff estimated the value of the project and assessed various scenarios resulting from attempts to mitigate the stranded costs presented by the contract.

WMB staff developed reservoir operation guidelines for most of the state-owned water storage projects. The guidelines are used to ensure that the reservoirs fill, minimize flooding, and address other reservoir issues. WMB staff also provided weather forecasting and snowpack information to State Water Projects Bureau personnel.

WMB staff is working on two major environmental assessments. One is a 1,000-acre irrigation project that would use water from the Marias River, and the other is the proposed creation of a wetland from waters diverted from the Bitterroot River.

WMB staff completed two environmental assessments for the State Water Projects Bureau. One was for the S & H Canal Fish Exclusion Project, and the other was for the Badger Creek Ranch Wildlife Conservation Easement, both of which are in Big Horn County.

WMB staff provided technical assistance in logging bore holes for dam stability studies of numerous state-owned dams.

WMB staff continued to lay out and publish the Water Resources Division's newsletter, the *Milk River Watershed News*, flyers, and other documents of the division, as well as design and update the Web page for the Water Resources Division.

WMB staff provided technical assistance and advice to the Reserved Water Rights Compact Commission in its negotiations with the Native American Tribes on the Fort Belknap Reservation and with the U.S. Forest Service.

WMB staff continued to assist the Water Operations Bureau with dam safety issues, such as the design of spillway standards for a number of storage projects, and with surveying.

WMB staff operated a gauging station on the T & Y Canal to help local water users manage available water supplies.

Water Operations

The Water Operations Bureau administers the Dam Safety, Floodplain, and Water Measurement Programs and provides staff support for the Board of Water Well Contractors.

Dam Safety Program

The primary purpose of the Dam Safety Program is to ensure that dams that have the potential to cause loss of life downstream, if they fail, are properly constructed, maintained, and operated. An operation permit is issued for high hazard dams that have been found to be safe; currently, 86 dams in the state are permitted, high hazard dams. An estimated additional 2,863 dams in the state are regulated by the Dam Safety Program, but do not require a permit.

Permitting of High Hazard Dams

To obtain or renew an operation permit, the high hazard dam owner must review and update the dam's emergency action, operation, and maintenance procedures and have an inspection conducted by a professional engineer. Often, conditions placed on an operation permit require that certain dam deficiencies be addressed. Failure to meet the conditions of an operation permit can result in a restriction on the reservoir level and/or a fine. The Dam Safety Program issued or renewed 13 operation permits in FY 1999 and FY 2000.

Any construction on a dam that could potentially be a threat to the dam's integrity requires a construction permit. The permit must be accompanied by design plans and specifications that are put together by a professional engineer. The Dam Safety Program issued construction permits in FY 2000 for these dams:

Costich Dam (Lincoln County)
Nilan Dam (Lewis and Clark County)

When a new dam is constructed or an existing dam repaired, the owner is required to apply for a hazard classification. A hazard classification is a determination of the potential for loss of life to occur downstream due to dam failure. In FY 2000, seven hazard analyses were completed.

Public Awareness/Education

This year's dam safety conference, held in West Yellowstone, was a two-day seminar on seismic hazards to dams. The approximately 100 attendees were primarily practicing engineers working in dam safety. In addition, in April 2000 all of the regional engineers attended a weeklong seminar in Denver on the safety evaluation of existing dams.

Permit Verification Program

Federal funding under the National Dam Safety Act was also used to complete a full-scale dam owner outreach program that was initiated in FY 1999. All of the regional office engineers and the Helena-based Dam Safety Program engineers participated. The goal of the program was to provide training to dam owners on how to accomplish the annual owner inspection. Another important component of the program was the review of emergency action plans and operation and maintenance plans.

Adoption of a New Spillway Standard

In April 1999, the Spillway Standards Committee recommended a new spillway standard to the department. The recommended spillway standard was based on the population at risk below the dam. Dams with a large potential to cause loss of life will be required to pass a much greater storm than dams with a low potential to cause loss of life. The Dam Safety Program held formal hearings in the fall of 1999. The spillway standard was adopted in October 1999 and is currently being enforced.

Seepage Monitoring Program

The Dam Safety Program is continuing to promote the implementation of seepage monitoring for all high hazard dams. The goal of monitoring the seepage is to provide long-term records of seepage flows. Long-term records are extremely valuable in determining whether a dangerous situation is developing in dams.

The Dam Safety Program is also involved in a national effort to develop a free software product to be used by dam owners to record their seepage data. The software should be released in November 2000.

Emergency Action Planning

In response to the need for accurate, updated emergency action plans, National Dam Safety Act funding was used to hire an emergency action plan assurance officer in June 1999. The primary duty of the assurance officer is to keep all high hazard dam emergency action plans in an updated and usable condition. This includes conducting regular plan tests as well as outreach to dam owners and local Disaster and Emergency Services personnel.

Student Engineering Project Aides

National Dam Safety Act funding was used to hire three engineering students for the summer of 2000 to assist regional engineers with their dam safety duties. The students were located in Kalispell, Missoula, and Lewistown. The students' primary responsibility was to assist with hazard classifications. The students also were involved with the update of emergency action plans. The students also conducted some floodplain mapping work.

Feasibility/Planning Study for Rehabilitation of State Prison Ranch Dams

The Dam Safety Program assisted the Department of Corrections by conducting a feasibility/planning study for the repair and rehabilitation of four high hazard Prison Ranch dams. This planning study was in turn used to prepare a Renewable Resource Grant application, which was submitted on behalf of the Department of Corrections in May 2000.

Board of Water Well Contractors

The Board of Water Well Contractors is responsible for licensing water well drillers, water well contractors, and monitoring well constructors. The board, which is attached to the Department of Natural Resources and Conservation for administrative purposes, establishes water well construction standards and enforcement and training procedures. Composed of five members, the board consists of one technical advisor/hydrogeologist appointed by the Montana Bureau of Mines and Geology (MBMG), two licensed Montana water well contractors appointed by the governor, one member appointed by the DNRC director, and one member appointed by the DEQ director. Each member serves a three-year term. Current board members are:

Pat Byrne, Chair Great Falls Well Driller	
Laurence Siroky, Vice Chair Helena DNRC	Robert N. Bergantino Butte MBMG
Eric Regensburger Helena DEQ	Kevin Haggerty Bozeman Well Driller

Licensing

During FY 2000, 294 people were licensed in three categories: water well contractors, monitoring well constructors, and water well drillers. Fifteen of these were new licensees. Eighteen former licensees did not renew their licenses.

Complaints and Investigations

This year, 53 complaints were received, out of 189 initial inquiries. Forty of the complaints were investigated for violations. Two faulty wells were repaired by the licensee without board action. Two wells were ordered to be repaired by the board. Two licenses were placed on probation.

Public Awareness/Education

The Board of Water Well Contractors and the Montana Environmental Training Center held 14 continuing education classes and approved six programs by suppliers and manufacturers for continuing education credit. Water well inspector exams were given to one regional office staff person.

A newsletter, *Well Developments*, is published and distributed to license holders and other interested persons.

Floodplain Management

The Floodplain Management Section is responsible for the oversight of 125 locally administered floodplain management programs throughout Montana. The primary goal of the program is to reduce the loss of life and structural property through wise floodplain development. The secondary goals are to reduce the loss of functional floodplains and reduce the amount of erosion of stream banks due to unwise floodplain development.

Projects

The floodplain program manager coordinated the Flood Mitigation Assistance Program in Montana. This program is primarily to relocate structures out of the 100-year floodplain. The secondary purpose is to elevate structures to 2 feet above the base flood elevation. Structural projects will be greatly limited based upon the type of project, location, and a cost/benefit comparison with other alternatives. The overall goal is to reduce flood insurance expenditures in the long run.

General technical and engineering assistance was given to local and state governments, private property owners, and engineering consulting firms. The Floodplain Management Program during the state FY 2000 sent out approximately 250 written responses to floodplain issues and concerns. Also, a total of 1,360 phone contacts were made during the second half of the federal FY 2000. Of these calls, 12 percent required follow-up.

No specific floodplain programs were evaluated by DNRC staff during the fiscal year. However, numerous programs were assisted over the phone, and the Federal Emergency Management Agency (FEMA) evaluated a number of communities in Montana.

Floodplain Management Studies

Floodplain management studies are ongoing in Cascade, Granite, Missoula, Petroleum, and Sanders Counties.

The Floodplain Management Program signed an agreement with FEMA to become a "Cooperating Technical Community." This will provide funding to the floodplain program to coordinate additional flood studies.

The 1999 Montana Legislature provided funding for floodplain management studies. Grant Creek in Missoula County is currently being studied.

Public Awareness/Education

Staff provided support to the Upper Yellowstone Task Force.

During the Association of Montana Floodplain Managers Conference, a floodplain administrators' workshop was held. Approximately 45 people attended the workshop.

Other Activities

The floodplain program manager represents Montana on the National Association of State Floodplain Managers and has acted as the Regional Director for FEMA Region VIII.

The community assistance program manager established the Association of Montana Floodplain Managers. The first annual conference was held in Butte. There are currently over 75 members in the association.

The community assistance program manager attends biweekly interagency meetings with the U.S. Army Corps of Engineers to review and comment on 404 permit applications.

The floodplain program manager is currently working with Park County to resolve outstanding controversial issues of unpermitted flood protection structures constructed during the 1996 and 1997 floods on the Yellowstone River.

Water Measurement Program

The purpose of the Water Measurement Program is to provide technical information and assistance in the measurement of surface water diversions. The program focuses on streams where dewatering causes conflicts between water users or impacts resources. Program staff continue to investigate streams for program inclusion.

Big Hole River

The Big Hole River has been delisted from potential designation as a "chronically dewatered watercourse." This action was the result of substantive progress made

by the Big Hole Watershed Committee in implementing a Drought Management Plan. The plan was implemented in the summer of 1999 and is in effect this year due to drought conditions.

The Water Measurement Program continues to represent DNRC at Watershed Committee meetings and provides snowpack and streamflow data to the committee. Program staff continue to conduct a hydrologic study of Big Lake Creek in the upper basin. The study will aid in determining the feasibility of creating a storage project. Stored water would be released to improve flows on the upper river to protect arctic grayling.

Dayton and Ronan Creeks

Water Measurement Program staff assisted NRCS and Lake County Conservation District by installing measuring devices on irrigation diversions on Dayton and Ronan creeks, near Dayton, Montana. The project is an effort to monitor and increase instream flows to protect bull and cutthroat trout habitat in these Flat-head Lake tributaries.

Jefferson River

The Water Measurement Program has been instrumental in forming the Jefferson River Watershed Council, a group representing irrigators, recreationists, conservation organizations, and agencies. The group concentrates on the river from Twin Bridges to just past the Waterloo Bridge. This river reach experiences the most severe dewatering. The group formed in June 1999 and has been meeting monthly since October 1999.

The Water Measurement Program, along with DFWP, has drafted a Drought Management Plan, which will be tested this summer. The Water Measurement Program has installed a recording stream gage at the Waterloo Bridge and will collect and analyze the data. Additionally, the program continues to measure irrigation diversions and is conducting an efficiency study of the Parrot Canal, which serves the largest, most senior water user in the system.

Mill Creek

Measuring devices have been installed on the major diversions from this tributary of the Yellowstone River. Program staff continue to collect diversion measurements at random and maintain contact with the water users and with DFWP, which administers water leases on Mill Creek.

Musselshell River

Installation of measuring devices continues on Musselshell River diversions. Several field trips have been conducted to spot-check compliance and provide technical assistance to water users. Several water development grant applications have been received requesting partial reimbursement for installation of headgates and measuring devices. The Lewistown Regional Office is assisting with these efforts.

Sweeney Creek

Sweeney Creek is located in the north end of the Bitterroot valley. Water users experience conflicts because streamflows and irrigation diversions have never been quantified. The Water Measurement Program has installed and rated a staff gauge on Sweeney Creek to help the water users monitor their supply. Measuring devices have also been inspected and rated.

Water Rights

The mission of the Water Rights Bureau is to ensure the orderly appropriation and beneficial use of Montana's waters. The two main programs are (1) adjudication, where the bureau assists the Water Court in identifying and evaluating pre-1973 water uses, and (2) new appropriations, which involves the administration and regulation of post-1973 water rights in Montana. In addition to operating the two programs, the Water Rights Bureau is directed by the Montana Constitution to maintain a centralized water right record system.

Water Right Records

The two types of records most accessed by the public as well as staff are in microfiche and electronic formats. With the water right database accessible on the Internet, the electronic records are becoming the most popular.

In FY 2000, efforts began to convert the water right database from an old main-frame system to a relational database such as Oracle. A vendor has been working with Water Rights Bureau staff to define the system and enhance the wide variety of water right information, forms, and data now available on the Internet at:

www.dnrc.state.mt.us/wrd/home.htm

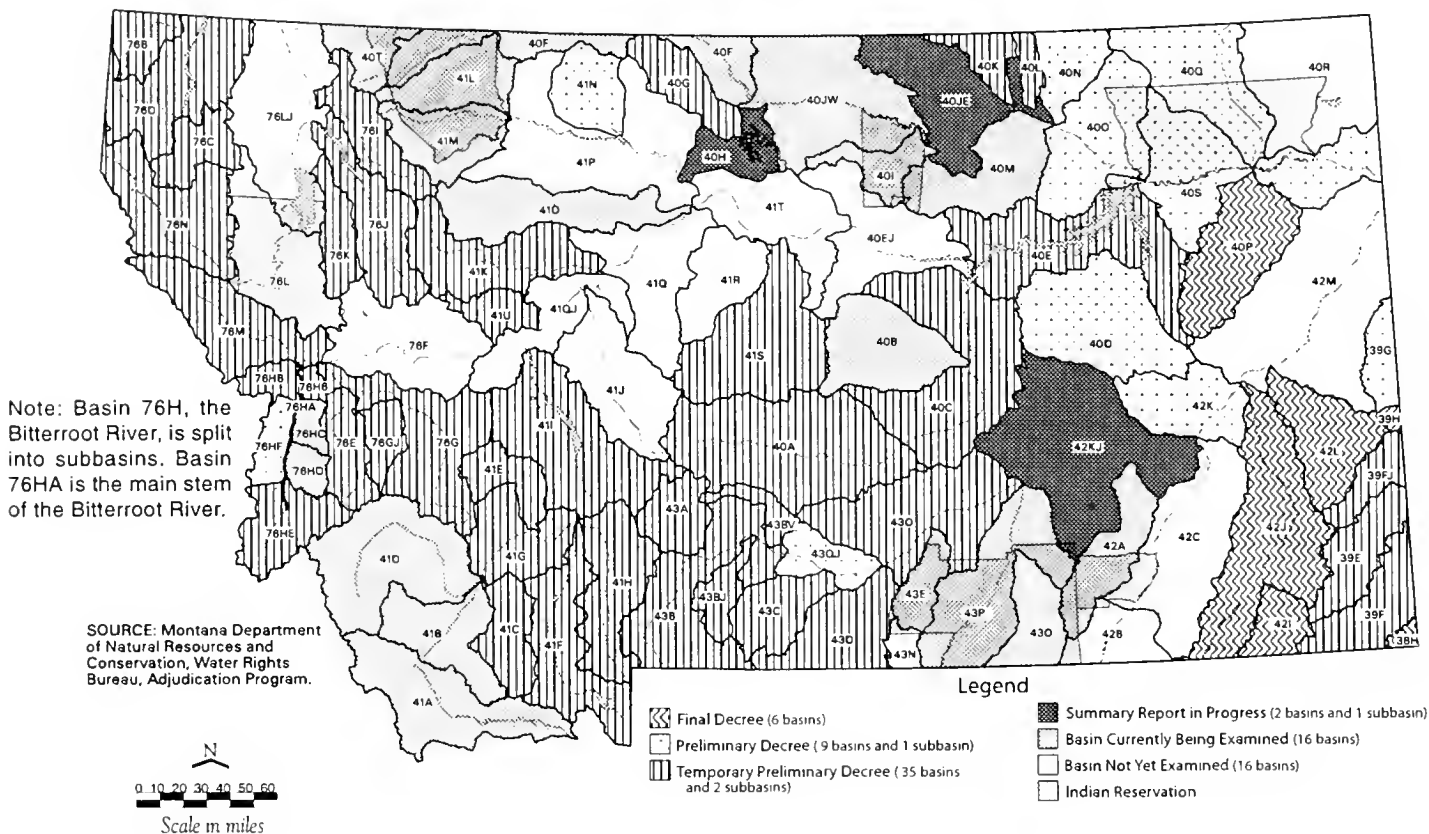
The redesign of the water rights database will provide more flexibility in information gathering and report generation, increased mapping capabilities, and improved customer access and service.

Adjudication

During FY 2000, 2,432 claims were examined in six of the eight Water Resources Division regional offices. Staff in these offices provided post-decree assistance to the Water Court. Regional office staff joined the court in working with hundreds of citizens to resolve issues and disputes on pre-1973 water use claims. Central and regional staff were also involved in preparing summary reports for the Milk River between the Dodson Creek and Rock Creek sub-basins and for the Yellowstone River between the Bighorn River and the Tongue River.

The Water Court issued Preliminary Decrees in December 1999 for the Poplar River basin and the Missouri River below Fort Peck Dam basin (see Figure 33). In April 2000, the Water Court issued its Preliminary Decree for the Rocky Boy's Compact.

Figure 33
Montana General Adjudication Status



In June 2000, a final draft of updates to the Claim Examination Rules was sent to the Water Court. Legal staff as well as staff from the central office, regional offices, and the Water Court assisted in the development of the draft rules.

New Appropriations

Applications for various types of water rights are received each year. Table 36 shows the number and types of applications and notices received and processed during FY 2000. These water right applications vary in complexity depending on each region's water supply, area-specific competition for water, and the specific project request. Staff in the division's eight regional offices process these applications.

Table 36
Water Right Applications
in Fiscal Year 2000

	Received	Processed
Permits	256	242
Changes	130	188
Groundwater Certificates	3,210	3,429
Water Right Ownership Updates	5,295	4,612
Exempt Water Rights	168	128
Extensions	96	107
Stockwater Permits	169	173
Project Completion Certifications	185	80
Verifications	0	411

When applicants and objectors are unable to settle their differences, the file moves into the hearings process. During FY 2000, 18 files were sent to the Hearings Unit, and 13 hearings were held. Parties often settle cases after the hearing is scheduled.

A controlled groundwater area in the Powder River basin was established as a result of coal bed methane gas activities in FY 2000, and the Old Butte Landfill/Clark Tailings Controlled Groundwater Area was established in Butte.

Regional Offices

The primary function of the division's eight regional offices is to work directly with the public in implementing programs for which the division is responsible. The regional offices play a large role in the accomplishments already discussed in this report concerning the division's programs. In addition, there are areas of special interest in the work of the regional offices over the past year that are highlighted here.

Billings — Clarks Fork Yellowstone River Floodplain Study

In recent years, development in the Billings area has increased steadily. With riparian areas being particularly popular sites for new home construction, the need for accurate, well-defined floodplain boundaries is imperative. The Billings Regional Office, on behalf of the Montana Floodplain Program and the U.S. Army Corps of Engineers, surveyed over 40 miles of river bottom and constructed a hydraulic model in order to establish expected 100-year flood levels. After model refinements and mapping, the Billings Regional Office will work with property owners and county officials to make sure that the end product meets the needs of Montana citizens.

Bozeman — Water Use Policy

The Bozeman staff has been involved in reviewing the water use policy on fish/wildlife/waterfowl ponds, reviewing the Supreme Court rules for water right claim examination procedures, and doing preliminary work on two new petitions for

controlled groundwater areas in Bozeman and Livingston. This year, the number of permit/change applications, well filings, complaints, and information requests from the public increased significantly. The drought situation and continued high rate of development in the Gallatin Valley and surrounding areas have kept the office very busy.

Glasgow — Water Conservation Planning

Glasgow Regional Office staff is helping the Milk River irrigation districts develop water conservation plans. Water conservation planning is a joint effort of USBR and DNRC under a cooperative agreement. Due to the lack of data, the conservation plans are primarily aimed at developing water budgets through increased water measurement efforts. The benefits of water measurement range from reducing waste in the short term to providing data to solve long-term problems. In addition to developing water conservation plans, the Glasgow staff is providing technical assistance in the implementation of the water conservation plans.

Grant Assistance

The Glasgow staff helped the Milk River Project Joint Board of Control with a Renewable Resource Grant application for additional work on the Saint Mary siphon. The 86-year-old structure was buckling as a result of downhill creep caused by seepage. The grant will provide funding assistance to replace 60 feet of pipe and raise it above ground.

HYDROSS Model

The Glasgow staff is working closely with the Joint Board of Control to educate board members on the HYDROSS Model. HYDROSS is being used in the Fort Belknap Compact negotiations to determine the impacts associated with tribal water development and how those impacts will be mitigated. It is important to have public confidence in how the impacts and mitigation alternatives are being determined.

Havre/Glasgow — Public Education

Staff from both the Havre and Glasgow Regional Offices coordinated and engaged in considerable public education and outreach in the past year. Multiple public meetings were conducted, including basic water rights informational meetings with watershed groups and meetings co-sponsored with the conservation districts and the Water Court regarding development of reserved water and ongoing adjudication activities. Considerable technical assistance was provided to the Milk River International Alliance watershed group and the Milk River Joint Board of Control for the eight Milk River irrigation districts that make up the Milk River Irrigation Project.

Helena — WRMapper

All of the water rights specialists and the program assistant have switched to Arc-View for most of their mapping needs. The Helena staff introduced WRMapper to the regional office managers and are working it into the regional offices' set of work tools. WRMapper offers a simpler and quicker method of mapping claims.

Kalispell

Clark Fork Basin Closure

The basin closure of the Clark Fork River upstream of Noxon Rapids Dam presented new challenges for the Kalispell Regional Office in permitting new appropriations. The Kalispell office helped organize two local public meetings to discuss the present impacts of the closure and the future of new appropriations in the local area.

Permitting on the Flathead Reservation

A Montana Supreme Court decision issued December 31, 1999, also changed permitting in the Kalispell Regional Office with regard to the Flathead Reservation. Local concern, work on existing applications within the reservation, and trying to determine the implications of the ruling presented many challenges.

Environmental Review Process

A second decision by the Montana Supreme Court resulted in reevaluating the environmental review process and reassessing many of the permit applications already received and processed. The Kalispell office had several pond applications that were affected by the decision. The office worked in several new environmental review areas and learned many new environmental review skills during the processing of permits affected by the decision.

Lewistown

Musselshell River Water Commissioner

For many years, the Lewistown Regional Office has supported and encouraged the appointment of water commissioners to equitably distribute Musselshell River water. The Musselshell River has a long history of water right conflicts, in part resulting from over-appropriations. After appointment of commissioners this year, a wider range of agricultural and environmental interests have had their rights satisfied. The Lewistown office helped convince water users that distribution of water by a commissioner was necessary for equitable apportionment to all users.

Grant Assistance

The Lewistown Regional Office assisted with the acquisition of funding for a variety of interests and projects. Technical support and grant-writing assistance were provided for EQIP Grants, EPA Grants, and Future Fisheries Grants. EQIP Grants provide funding to agricultural producers for such activities as improving irrigation system efficiencies and developing off-stream stockwater. The EPA Grant was used to establish a stream gauge on the Judith River, which previously was the largest

ungauged watershed in Montana. The Future Fisheries Grant was used to provide a fish passageway through the Martinsdale Reservoir diversion structure, which historically impeded migration of spawning brown trout.

Lower Musselshell River Floodplain Designation

The Lewistown Regional Office completed mapping and designation of the Musselshell River floodplain through Petroleum, Garfield, and Rosebud Counties. The designation included 120 river miles.

Missoula — Geographical Information System

The Missoula Regional Office continues to work closely with the Water Court in the adjudication of water rights in the Bitterroot basin. Staff, through use of GIS computer software, generate maps that show claimed and verified irrigated acreages that can be overlaid by maps of the historically decreed water rights, plat maps, aerial photos, and USGS quad maps. Such “pictures” of the issues make the process of resolving objections much more efficient.

APPENDIX A

FUNDING INFORMATION CONCERNING THE RESOURCE INDEMNITY TAX AND THE COAL SEVERANCE TAX

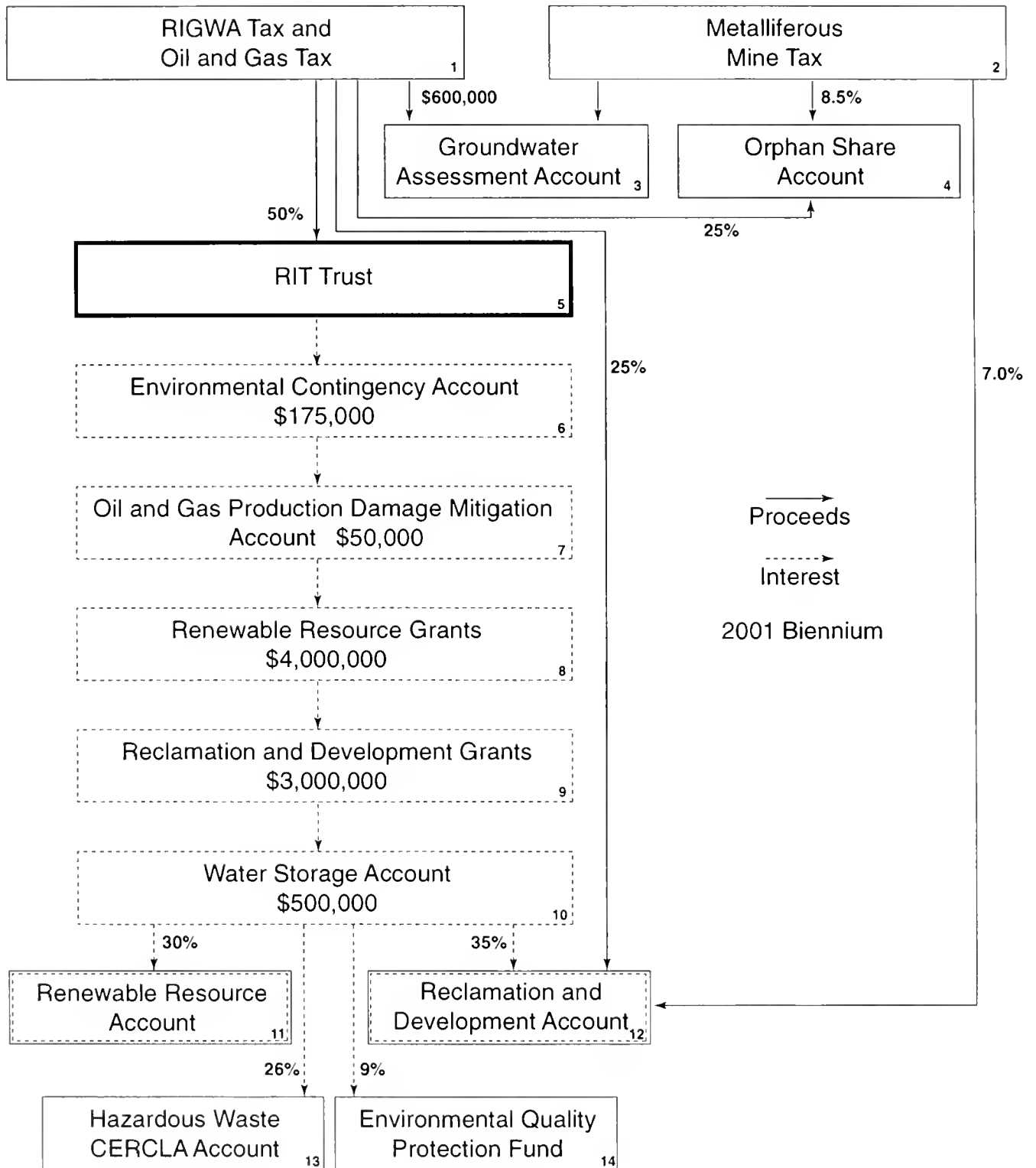
APPENDIX A

FUNDING INFORMATION CONCERNING THE RESOURCE INDEMNITY TAX AND THE COAL SEVERANCE TAX

Resource Indemnity Tax

1. The **Resource Indemnity Groundwater Assessment Tax (RIGWA)** is a 0.5 percent tax of the gross value of the product of all mineral mining (see Figure A-1). The tax was originally created in 1973. Mineral production, including coal, metals (gold, silver, copper, lead), talc, vermiculite, limestone, and other "nonrenewable merchantable products extracted from the surface or subsurface of the state of Montana" (MCA 15-38-103), is taxed. In addition to RIGWA proceeds, an 8.6 percent share of the oil and gas production tax is distributed to the RIT Trust and its associated accounts (MCA 15-36-324).
2. The **Metalliferous Mine Tax** is a tax on "the annual gross value of product" of all metal mine production or precious or semiprecious gem or stone production (MCA 15-37-101 et seq.). The tax rate is 1.81 percent of the annual gross value over \$250,000 for concentrate shipped to a smelter, mill, or reduction work (MCA 15-37-103). For gold, silver, or any platinum-group metal that is dore, bullion, or matte and that is shipped to a refinery, the tax rate is 1.6 percent of the annual gross value over \$250,000 (MCA 15-37-103).
3. The **Groundwater Assessment Account** was created in 1991 (MCA 85-2-901 et seq.). The purpose of the account is to fund a statewide Groundwater Assessment Program that will monitor the quantity and quality of the state's groundwater. The program is staffed by the Montana Bureau of Mines and Geology in Butte. An oversight committee reviews all expenditures, approves monitoring sites, prioritizes areas, coordinates information, and evaluates reports.
4. The **Orphan Share Account** was created in 1997 (MCA 75-10-743). The purpose of this fund is to provide funding for remediation and reclamation projects where the party responsible for the contamination no longer exists. The Montana Department of Environmental Quality is charged with administering the account. For projects where there are multiple parties, the state will participate in the negotiations to ensure that a fair allocation of the responsibilities for cleanup is made. In these cases a lead party will be responsible for proceeding with cleanup. All parties would participate financially, to the extent that they were responsible for the contamination. The portion of the contamination caused by parties that no longer exist is called the "orphan share," and these costs may be reimbursed if funds are available within the Orphan Share Account. If sufficient funds are not immediately available, reimbursements will be made over time as funds are deposited into the account.
5. The **Resource Indemnity Tax Trust (RIT Trust)** was created in 1973. No funds that are deposited into the trust can be spent until the total deposits exceed \$100 million. This protection is provided in Article IX, Section 2 of

Figure A-1
Allocation of Resource Indemnity Tax
Proceeds and Interest



the Montana Constitution. Trust fund proceeds are invested, and the interest earnings are distributed to several natural resource programs.

6. The **Environmental Contingency Account** was created in 1985 (MCA 75-1-1101 et seq.). The governor has the authority to approve expenditures from this account to meet unanticipated public needs. Specifically, the statute limits projects to the following objectives: (1) to support renewable resource development projects in communities that face an emergency or imminent need for the services or to prevent the failure of a project; (2) to preserve vegetation, water, soil, fish, wildlife, or other renewable resources from an imminent physical threat or during an emergency, not including natural disasters or fire; (3) to respond to an emergency or imminent threat to persons, property, or the environment caused by mineral development; and (4) to fund the Environmental Quality Protection Fund. Each biennium \$175,000 of the RIT Trust interest earnings is allocated to this account. The balance in this account cannot exceed \$750,000.
7. The **Oil and Gas Production Damage Mitigation Account** was created in 1989 (MCA 85-2-161). The Board of Oil and Gas Conservation may authorize payment for the cost of properly plugging a well and either reclaiming and/or restoring a drill site or other drilling or producing area damaged by oil and gas operations. The site must be abandoned, and the responsible person either cannot be identified or refuses to correct the problem. Each biennium \$50,000 of the RIT Trust interest earnings is allocated to this account. The balance in this account cannot exceed \$200,000.
8. **Renewable Resource Grants** receive \$2 million in RIT Trust interest earnings per year, or \$4 million for the biennium (MCA 85-1-604). The Renewable Resource Grant and Loan Program was created in 1993 by combining the Renewable Resource Development Program and the Water Development Program. The purpose of the grant program is to fund projects that conserve, develop, manage, and preserve water and other renewable resources. Projects include construction and rehabilitation of existing water supply systems and wastewater systems, educational efforts, feasibility studies, development of water storage, enhancement of renewable resources including recreation, reduction and advancement of agricultural chemical use, and improvement of water use efficiency (MCA 85-1-602).
9. The **Reclamation and Development Grants Program** was established in 1987. This program receives \$1.5 million in RIT Trust interest earnings per year, or \$3 million per biennium. The purposes of the program are: (1) to repair, reclaim, and mitigate environmental damage to public resources from nonrenewable resource extraction; and (2) to develop and ensure the quality of public resources for the benefit of all Montanans (MCA 90-2-1101). Projects have included plugging abandoned oil and gas wells, reclaiming mine sites, controlling nonpoint source pollution, researching new technologies for mine waste cleanup, conducting groundwater studies to determine the extent of contamination, and cleaning up pesticide contamination.
10. The **Water Storage Account** was established in 1991 (MCA 85-1-701 et seq.). The purpose of the account is to provide funding for projects that rehabilitate existing water storage facilities or develop new ones. Priority is given to high

hazard, unsafe dams. Each biennium \$500,000 of RIT Trust interest earnings is deposited into this account.

11. The **Renewable Resource Grant and Loan Program** State Special Revenue Account receives 30 percent of the remaining interest earnings from the RIT Trust (MCA 85-1-601). This special revenue account also receives revenue from excess deposits in the Renewable Resource Debt Service Account and other administrative fees. The revenues are used to fund natural resource agency projects and administration, including the administration of the Renewable Resource Grant and Loan Program, the Flathead Basin Commission, the Water Court, MSU Northern, and the Montana State Library.
12. The **Reclamation and Development Grants Program** State Special Revenue Account receives 35 percent of the remaining RIT Trust interest earnings, 25 percent of the RIGWA tax proceeds, and 7 percent of the Metalliferous Mine Tax (MCA 90-2-1101). The revenues are used to fund projects and administration of natural resource agencies, including the administration of the Reclamation and Development Grants Program, Montana State Library, Department of Environmental Quality, and Environmental Quality Council.
13. The **Hazardous Waste CERCLA Account** is administered by the Department of Environmental Quality (MCA 75-10-601 et seq). CERCLA stands for the federal Comprehensive Environmental Response, Compensation, and Liability Act. This account receives 26 percent of the remaining RIT Trust interest earnings. The account was established in 1983 and is to be used to make payments on CERCLA bonds, implement the Montana Hazardous Waste Act, and provide assistance in remedial actions under CERCLA.
14. The **Environmental Quality Protection Fund** was established in 1985 and is administered by the Department of Environmental Quality (MCA 75-10-704 et seq.). This account receives 9 percent of the remaining RIT Trust interest earnings. The purpose of this account is to provide funding for remedial actions taken by the department in response to a release of hazardous or deleterious substances.

Coal Severance Tax

Within 30 days of the end of each calendar quarter, coal severance taxes are paid to the state, and 50 percent of these are deposited in the **Coal Severance Tax Trust Fund** by the Department of Revenue (see Figure A-2 and Table A-1). Six accounts are established within the trust: (1) the **Coal Severance Tax Bond Fund**, (2) the **School Bond Contingency Loan Fund**, (3) the **Treasure State Endowment Regional Water System Fund**, (4) the **Treasure State Endowment Fund**, (5) the **Coal Severance Tax Permanent Fund**, and (6) the **Coal Severance Tax Income Fund** (see Figure A-3).

1. Coal tax revenues that flow into the trust are initially deposited in the **Coal Severance Tax Bond Fund** (Bond Fund) and made available for payment of debt service on Coal Severance Tax Bonds (see footnotes 7, 8, and 9). The Department of Natural Resources and Conservation (DNRC) informs the Department of Revenue, during the first quarter of each state fiscal year, of the amount necessary to meet all principal and interest payments on bonds pay-

able from the Bond Fund for the next year (two semiannual payments). The Department of Revenue retains that amount in the Bond Fund.

2. The January 1992 Special Legislative Session passed an act creating the **Coal Severance Tax School Bond Contingency Loan Fund** (Contingency Loan Fund). A total of \$25 million of school bonds was authorized to be issued and secured by this fund. For as long as there are any outstanding school district bonds secured by the Contingency Loan Fund, an amount equal to the next 12 months of principal and interest payments due on any school bonds is retained in the Contingency Loan Fund. DNRC provides written notice to the Department of Revenue in January of each year of the amount needed to secure school district bonds.

Figure A-2
Allocation of Coal Severance Tax

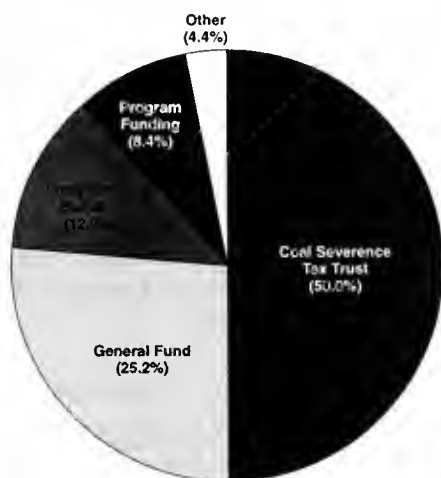


Table A-1
Allocation of Coal Severance Tax

		FY 2000 (\$1,000)	FY 2001 (\$1,000)
Coal Severance Tax Collections (Revenue Oversight Committee Estimates)		\$32,766	\$31,548
Coal Severance Tax Trust Fund	50.00%	\$16,383	\$15,774
General Fund	25.25%	8,274	7,966
Long-Range Building Program	12.00%	3,932	3,786
Program Funding	8.36%	2,739	2,637
Other			
Parks Acquisition and Management Trust	1.27%	416	401
Renewable Resource Loan Debt Service	0.95%	311	300
Cultural and Aesthetic Trust and Capitol Art	0.87%	285	274
Virginia and Nevada Cities	1.30%	426	410

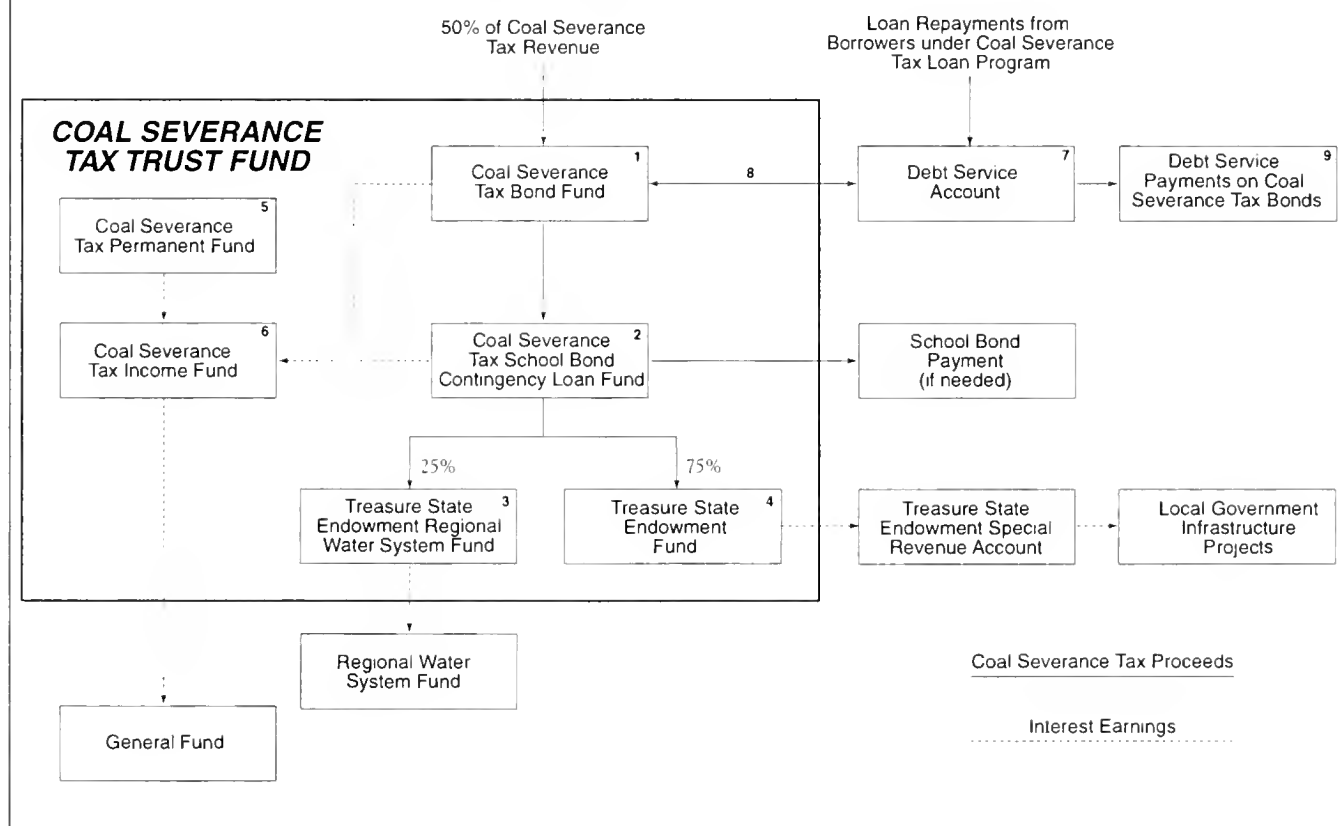
3. The **Treasure State Endowment Regional Water System Fund** was established to provide state funding for regional water systems. Initially, the North Central Rocky Boy's Regional Water System and the Dry Prairie Fort Peck Regional Water System were authorized. During the first quarter of each state fiscal year, 25 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund is deposited in the Regional Water System Fund.
4. The **Treasure State Endowment Fund (Endowment Fund)** was established when voters approved the ballot measure on June 2, 1992. During the first quarter of each state fiscal year, 75 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund is deposited in the Endowment Fund. The Department of Commerce notifies the Department of Revenue when interest earnings are needed to fund local infrastructure projects. The Department of Revenue then transfers the interest earnings from the Endowment Fund to the **Treasure State Endowment Special Revenue Account (Revenue Account)**. The Department of Commerce then approves the disbursement of funds to authorized local governments. Interest earnings not transferred to the Revenue Account for projects are retained in the Endowment Fund.
5. The **Coal Severance Tax Permanent Fund (Permanent Fund)** receives no new tax proceeds. The fund balance within the trust is invested by the Board of Investments. The earnings from the Permanent Fund are deposited into the General Fund. State law states that up to 25 percent of the Permanent Fund can be invested in the Montana economy.
6. Investment income on the deposits in the **Bond Fund**, the **Contingency Loan Fund**, and the **Permanent Fund** are periodically transferred to the **Coal Severance Tax Income Fund**. The entire balance in the Income Fund is transferred to the **General Fund** on a monthly basis.
7. Under the Coal Severance Tax Loan Program, the state sells coal severance tax bonds and loans the proceeds to local governments for various infrastructure projects. The borrowers make semiannual or annual loan payments, which upon receipt are credited to a **Debt Service Account**. The terms of the loans vary, but generally involve an interest rate subsidy for the first five years of the loan followed by a direct pass-through of the interest rate on the state bonds for the remaining life of the loan. The loan program and debt service accounts are administered by DNRC.
8. Debt service payments on the bonds are due each June 1 and December 1. To the extent that funds on hand in the Debt Service Account are insufficient to pay principal and interest on the bonds when due, funds are transferred to the Debt Service Account from the Bond Fund.

On January 1 of each year, funds are transferred to the Debt Service Account from the Bond Fund to the extent necessary to cause the balance in the Debt Service Account to equal one-twelfth of the next two ensuing semiannual debt service payments. DNRC provides written notice to the Department of Revenue if funds are needed to pay debt service or to make the required transfer on January 1. On January 1 of each year, DNRC also sweeps the Debt

Service Account of funds in excess of one-twelfth of the next two ensuing semiannual debt service payments. The excess is returned to the Bond Fund in repayment of borrowed money, if necessary, or deposited in the Renewable Resource Grant and Loan Program Special Revenue Account.

9. On each June 1 and December 1, the state pays debt service on the bonds from amounts on hand in the Debt Service Account. Payments are made by DNRC.

Figure A-3
Coal Severance Tax Trust Fund
Flow of Funds Summary



APPENDIX B

REPORT ON RETURN ON ASSET VALUE BY TRUST AND LAND OFFICE FOR CLASSIFIED FORESTED LANDS

APPENDIX B

**Report on
Return on Asset Value by Trust and
Land Office for
Classified Forested Lands
(77-1-223-225 MCA)**

Fiscal Year 2000

September 2000

**Prepared By
Trust Land Management Division
Department of Natural Resources and Conservation**

Introduction

This report is the result of a SB 411 passed by the 1999 Legislature requiring that the Land Board report to the beneficiaries the return on asset by trust and DNRC land office. Trust lands are managed by DNRC through six land offices located in Kalispell (the Northwestern Land Office, or NWLO), Missoula (the Southwestern Land Office or SWLO), Helena (the Central Land Office or CLO), Lewistown (the Northeastern Land Office or NELO), Billings (the Southern Land Office or SLO), and Miles City (the Eastern Land Office or ELO). See Figure 1.0.

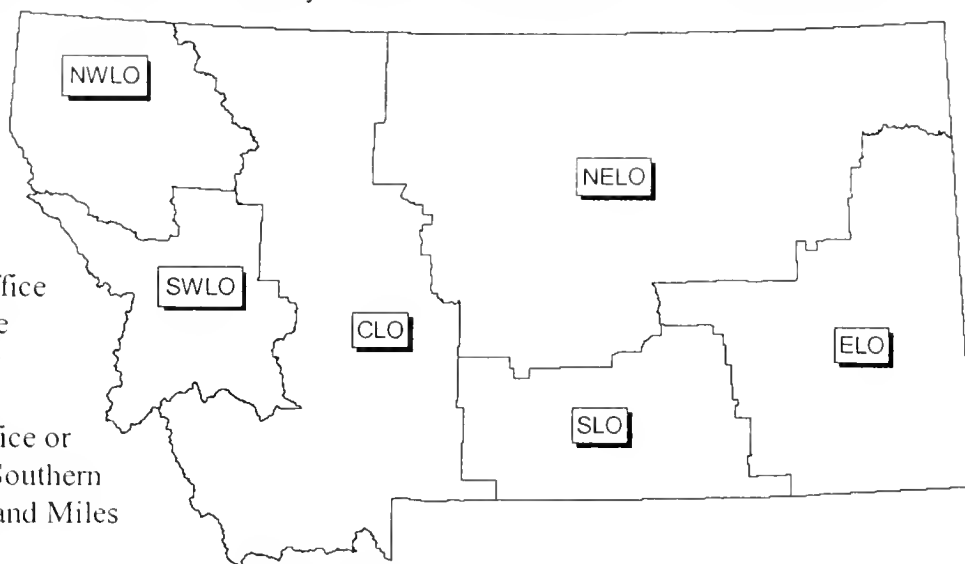


Figure 1.0 Map of Montana with Land Office Boundaries

The act, codified at 77-1-223-225 MCA requires the Board of Land Commissioners to provide annual reports regarding the average return of revenue on asset value to trust beneficiaries of forested lands. This report is for forested lands classified by 77-1-401 as Class 2 lands that are held in trust for the beneficiary. The report must include for each beneficiary:

- (1) the total acreage of forested land held in trust;
- (2) a summary of the asset value for the forested tracts held in trust;
- (3) a calculation of the average return of revenue on asset value for the forested tracts held in trust; and
- (4) a listing by each department land office of the total acreage of forested land administered for the trust beneficiary and a calculation of the average return of revenue on asset value for lands designated to the trust beneficiary.

Classified Forested Acres

Table 1.0 displays the number of gross acres of classified forest lands by land office and trust. Most of the land is in the Common Schools trust and is located on the Northwestern and Southwestern Land Offices (see Table 1.0). There are no classified forest lands on the Eastern Land Office and Southern Land Office; thus, they are not included in this report. The trust abbreviations are ACB – Montana State University, ACI – Montana State University – Morrill, CS – Common School, D&DA – Deaf-Blind School, PB – Public Building, SM – Montana Tech, SNS – Eastern & Western, SRS – State Reform School and UNIV – University of Montana.

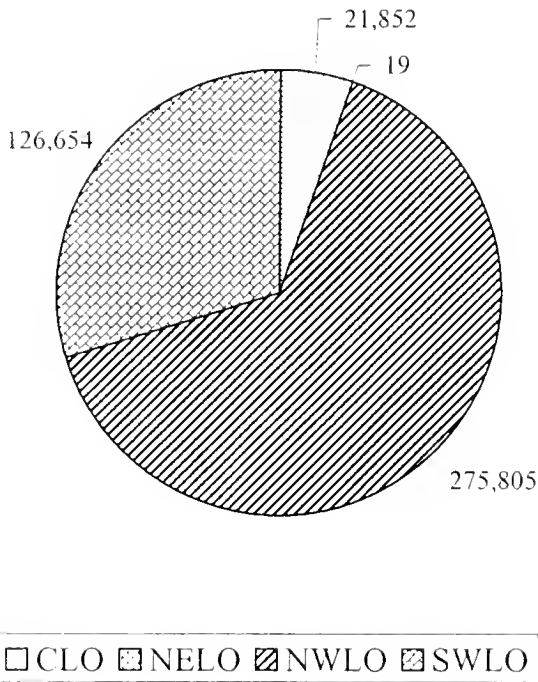
Table 1.0 Number of Gross Acres of Classified Forest Lands by Land Office and Trust										
Land Office	ACB	ACI	CS	D&DA	PB	SM	SNS	SRS	Univ	Total
CLO	793	-0-	13,927	641	2,482	1,244	639	11,621	-0-	31,347
NELO	-0-	-0-	653	-0-	-0-	-0-	-0-	-0-	-0-	653
NWLO	12,791	3,495	207,815	8,852	40,994	10,961	10,816	1,643	157	297,524
SWLO	9,423	2,115	93,662	1,191	28,430	3,012	3,887	5,092	1,282	148,093
Total	23,007	5,609	316,058	10,684	71,905	15,217	15,343	18,356	1,438	477,617

The next table, Table 2.0, displays the net forest acres by trust and land office from classified forest lands. Net acres were determined by subtracting areas such as non-forested, hardwoods, cabin sites, etc. These net forest acres were multiplied by the Department of Revenue land value estimate to determine the asset value listed in Table 3.0. Figure 2.0 displays the total net forest acres of classified forest lands by land office.

Table 2.0 Number of Net Forested Acres for Classified Forest Lands by Land Office and Trust										
Land Office	ACB	ACI	CS	D&DA	PB	SM	SNS	SRS	Univ	Total
CLO	509	-0-	9,511	502	2,371	1,120	540	7,299	-0-	21,852
NELO	-0-	-0-	19	-0-	-0-	-0-	-0-	-0-	-0-	19
NWLO	11,818	3,354	192,784	8,309	38,575	9,818	9,366	1,626	155	275,805
SWLO	7,944	2,069	79,002	400	26,366	2,556	3,506	4,488	322	126,654

Total	20,271			9,211		13,494	13,412		477	424,329
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Figure 2.0 Total Net Forested Acres from Classified Forest Lands by Land Office



		5,423	281,316		67,312			13,413		
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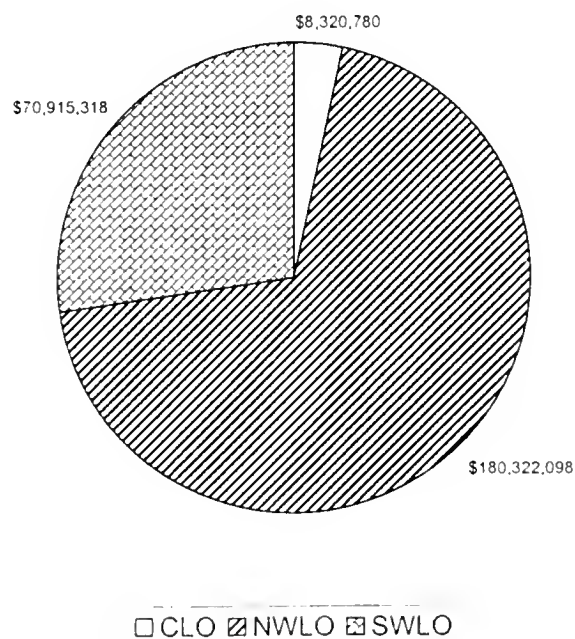
Asset Value for Classified Forest Lands

The asset value was determined using the Department of Revenue forest productivity valuation procedures (Title 15, chapter 44, part 1) for each trust beneficiary and by land office. The asset values are based on land value derived from the DOR procedures for the assessment year 1999 multiplied by the net forest acres of classified forest lands. Values are in constant 2000 dollars. Due to the low number of total and net acres in the NELO this land was dropped from tables and figures. NELO results will be summarized in a paragraph near the end of this report.

Table 3.0 Total Asset Value by Trust Based on Net Forest Acres for Classified Forest Lands (2000 Dollars)										
Land Office	ACB	ACI	CS	D&DA	PB	SM	SNS	SRS	Univ	Total
CLO	\$ 156,890	\$ -0-	\$ 3,380,859	\$ 317,363	\$ 1,214,280	\$ 573,058	\$ 259,433	\$ 2,418,896	-0-	\$ 8,320,780
NWLO	7,383,103	2,010,218	129,242,748	5,325,442	22,996,524	6,183,296	5,939,777	1,152,548	88,442	180,322,098
SWLO	4,679,544	849,586	44,204,994	169,252	14,638,987	1,432,902	1,982,818	2,798,911	158,324	70,915,318
Total	\$12,219,537	\$2,859,804	\$176,832,679	\$5,812,057	\$38,849,791	\$8,189,256	\$8,182,028	\$6,370,355	\$ 246,767	\$259,562,274

The next figure (Figure 3.0) displays the total asset value by land office. Most of the value is located in the Northwestern and Southwestern Land Offices.

Figure 3.0 - Total Asset Value of Classified Forest Lands Using DOR Valuation Procedure for Assessment Year 1999



Average Annual Gross Revenue

The total average revenue is a 10-year average of the following revenue sources: forest products sales; grazing & agriculture, etc.; minerals, oil and gas; special recreational use leases and licenses; and conservation leases and licenses. Over 90 percent of the gross revenue on classified forest lands is from the forest product sale program. These values are in current 2000 dollars.

Table 4.0 Average Total Annual Gross Revenue by Trust for Classified Forest Lands (2000 Dollars)										
Land Office	ACB	ACI	CS	D&DA	PB	SM	SNS	SRS	Univ	Total
CLO	\$ 862	\$ -0-	\$ 112,486	\$ 241	\$ 1,742	\$ 2,214	\$ 14,476	\$43,340	\$ -0-	\$ 175,361
NWLO	163,401	30,316	2,836,701	256,455	477,427	57,772	30,333	12,222	5,186	3,869,814
SWLO	303,376	67,095	934,733	10,578	240,773	17,391	224,511	39,991	7,959	1,846,406
Total	\$467,640	\$97,410	\$3,883,920	\$267,274	\$719,942	\$77,377	\$269,321	\$95,553	\$13,145	\$5,891,580

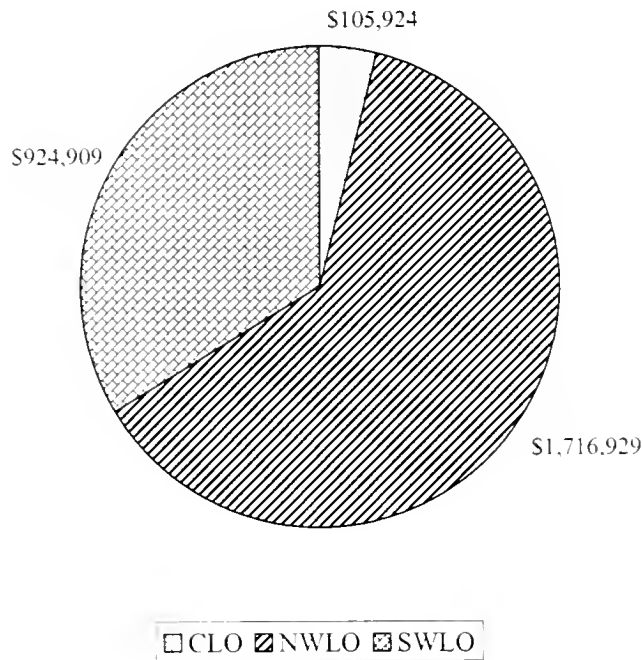
Average Annual Net Revenue

The average annual net revenue was estimated by using a revenue-to-cost ratio by revenue source. The net revenue was estimated by subtracting the estimated cost from the gross revenue by source. The estimated cost was calculated by dividing the revenue-to-cost ratio into the gross revenue (see Appendix L for revenue-to-cost by revenue source). Approximately 90 percent of the net revenue is from the Forest Product Sales program. These values are in constant 2000 dollars. Table 5.0 displays the average annual total net revenue from classified forest by trust and land office.

Table 5.0 Average Annual Total Net Revenue by Trust for Classified Forest Lands (2000 Dollars)										
Land Office	ACB	ACI	CS	D&DA	PB	SM	SNS	SRS	UNIV	Total
CLO	\$ 598	\$ -0-	\$ 65,363	\$ 128	\$ 1,091	\$ 1,564	\$ 13,767	\$23,414	\$ -0-	\$ 105,924
NWLO	72,769	13,970	1,259,798	112,269	210,924	25,821	13,703	5,383	2,291	1,716,929
SWLO	138,362	30,723	476,417	7,810	123,252	10,676	108,473	22,462	6,734	924,909
Total	\$211,729	\$44,693	\$1,801,577	\$120,207	\$335,267	\$38,061	\$135,943	\$51,259	\$9,025	\$2,747,762

Figure 4.0 displays the total annual net revenue from classified forest lands by land office. Once again, most of the net revenue is from the Northwestern and Southwestern Land Offices.

Figure 4.0 Average Annual Total Net Revenue from Classified Forest Lands by Land Office



Return On Asset

The return on asset calculation is the net revenue divided by the asset value. The next two figures display the return on asset value by trust and total. Figure 5.0 is based on the net revenue and land appreciation, while Figure 6.0 is only net revenue.

Figure 5.0 Return on Asset from Classified Forest Lands With Land Appreciation

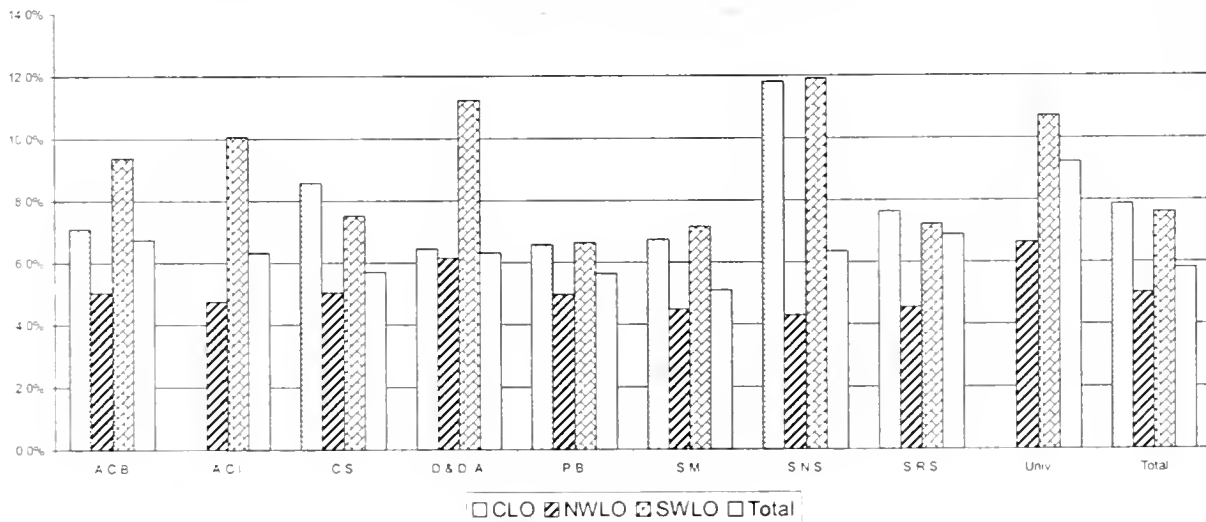
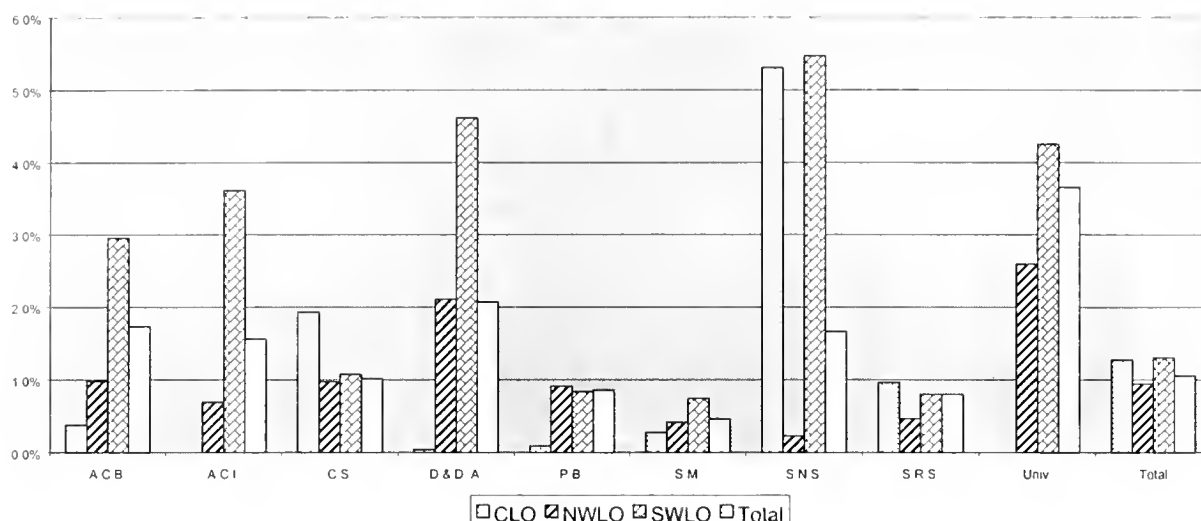


Figure 6.0 Return on Asset (Net Revenue) from Classified Forest Lands With No Land Appreciation



Tables 6.0 through 9.0 display the results of the analysis. These tables contain the net revenue, land appreciation, asset value, return on asset based revenue only, appreciation only, and total by land office and total by trust for classified forest lands. For details on the analysis see the appendixes to this report.

	Net Revenue	Land Appreciation	Asset Value	Return on Asset		
				Revenue Only	Land Appreciation Only	Total
ACB	\$ 598	\$ 10,537	\$ 156,890	0.4%	6.7%	7.1%
ACI	-0-	-0-	-0-	0.0%	0.0%	0.0%
CS	65,363	224,676	3,380,859	1.9%	6.6%	8.3%
D&DA	128	20,388	317,363	0.0%	6.4%	6.5%
PB	1,091	78,714	1,214,280	0.1%	6.5%	6.6%
SM	1,564	37,128	573,058	0.3%	6.5%	6.7%
SNS	13,767	16,857	259,433	5.3%	6.5%	11.0%
SRS	23,414	161,515	2,418,896	1.0%	6.7%	7.7%
Univ.	-0-	-0-	-0-	0.0%	0.0%	0.0%
Total	\$ 105,924	\$ 549,814	\$ 8,320,780	1.3%	6.6%	7.8%

Table 7.0 Net Revenue, Land Appreciation, Asset Value, and Return on Asset for the Northwestern Land Office from Classified Forest Lands (2000 \$'s)

	Net Revenue	Land Appreciation	Asset Value	Return on Asset		
				Revenue Only	Land Appreciation Only	Total
ACB	\$ 72,769	\$ 299,381	\$ 7,383,103	1.0%	4.1%	5.0%
ACI	13,970	81,420	2,010,218	0.7%	4.1%	4.7%
CS	1,259,798	5,250,411	129,242,748	1.0%	4.1%	5.0%
D&DA	112,269	216,092	5,325,442	2.1%	4.1%	6.2%
PB	210,924	931,286	22,996,524	0.9%	4.0%	5.0%
SM	25,821	250,784	6,183,296	0.4%	4.1%	4.5%
SNS	13,703	240,952	5,939,777	0.2%	4.1%	4.3%
SRS	5,383	46,885	1,152,548	0.5%	4.1%	4.5%
Univ.	2,291	3,577	88,442	2.6%	4.0%	6.6%
Total	\$ 1,716,929	\$ 7,320,790	\$180,322,098	1.0%	4.1%	5.0%

Table 8. Net Revenue, Land Appreciation, Asset Value, and Return on Asset for the Southwestern Land Office from Classified Forest Lands (2000 \$'s)

	Net Revenue	Land Appreciation	Asset Value	Return on Asset		
				Revenue Only	Land Appreciation Only	Total
ACB	\$ 138,362	\$ 301,003	\$ 4,679,544	3.0%	6.4%	9.4%
ACI	30,723	54,904	849,586	3.6%	6.5%	10.1%
CS	476,417	2,844,308	44,204,994	1.1%	6.4%	7.5%
D&DA	7,810	11,175	169,252	4.6%	6.6%	11.2%
PB	123,252	851,719	14,638,987	0.8%	5.8%	6.7%
SM	10,676	92,130	1,432,902	0.7%	6.4%	7.2%
SNS	108,473	127,472	1,982,818	5.5%	6.4%	11.9%
SRS	22,462	180,122	2,798,911	0.8%	6.4%	7.2%
Univ.	6,734	10,199	158,324	4.3%	6.4%	10.7%
Total	\$ 924,909	\$ 4,473,033	\$ 70,915,318	1.3%	6.3%	7.6%

Table 9.0 Net Revenue, Land Appreciation, Asset Value, and Return on Asset from All Classified Forest Lands (2000 \$'s)

	Net Revenue	Land Appreciation	Asset Value	Return on Asset		
				Revenue Only	Land Appreciation Only	Total
ACB	\$ 211,729	\$ 610,921	\$ 12,219,537	1.7%	5.0%	6.7%
ACI	44,693	136,324	2,859,804	1.6%	4.8%	6.3%
CS	1,801,577	8,319,724	176,832,679	1.0%	4.7%	5.7%
D&DA	120,207	247,655	5,812,057	2.1%	4.3%	6.3%
PB	335,267	1,861,719	38,849,791	0.9%	4.8%	5.7%
SM	38,061	380,042	8,189,256	0.5%	4.6%	5.1%
SNS	135,943	385,281	8,182,028	1.7%	4.7%	6.4%
SRS	51,259	388,522	6,370,355	0.8%	6.1%	6.9%
Univ.	9,025	13,777	246,767	3.7%	5.6%	9.2%

Total	\$ 2,747,762	\$ 12,343,964	\$259,562,274	1.1%	4.8%	5.8%
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Table 10.0 is a summary of the return on asset for classified forest lands, including both net revenue and land appreciation.

Table 10.0 Return on Asset for Classified Forest Lands – Based on Net Revenue and Appreciation										
Land Office	ACB	ACI	CS	D&DA	PB	SM	SNS	SRS	UNIV	Total
CLO	7.1%	0.0%	8.6%	6.5%	6.6%	6.8%	11.8%	7.6%	0.0%	7.9%
NWLO	5.0%	4.7%	5.0%	6.2%	5.0%	4.5%	4.3%	4.5%	6.6%	5.0%
SWLO	9.4%	10.1%	7.5%	11.2%	6.7%	7.2%	11.9%	7.2%	10.7%	7.6%
Total	6.7%	6.3%	5.7%	6.3%	5.7%	5.1%	6.4%	6.9%	9.2%	5.8%

Gross Returns

Table 11.0 is the return on asset calculation using gross revenue and land appreciation.

Table 11.0 Return on Asset for Classified Forest Lands – Based on Gross Revenue and Land Appreciation										
Land Office	ACB	ACI	CS	D&DA	PB	SM	SNS	SRS	Univ	Total
CLO	7.3%	0.0%	10.0%	6.5%	6.6%	6.9%	12.1%	8.5%	0.0%	8.7%
NWLO	6.3%	5.6%	6.3%	8.9%	6.1%	5.0%	4.6%	5.1%	9.9%	6.2%
SWLO	12.9%	14.4%	8.5%	12.9%	7.5%	7.6%	17.8%	7.9%	11.5%	8.9%
Total	8.8%	8.2%	6.9%	8.9%	6.6%	5.6%	8.0%	7.6%	10.9%	7.0%

Northeastern Land Office

The Northeastern Land Office, headquartered in Lewistown, has only one section of land that is classified forest. This section has 653 acres, of which 19 acres meets the definitions used by DOR for forest. This leads to an asset value of \$4,079 using DOR procedures. The total gross revenue from timber product sale and oil and gas leasing for the last ten years in 2000 dollars was \$8,381 while the net revenue equaled an approximate value of \$4,000. Using the asset and these revenue estimates the return on asset is over 100% for net and over 200% for gross. This high return is the result of the low number of acres used in the asset value, a recent timber sale that harvested timber from the section and revenue from oil and gas leasing the in mid to late 1990's. This section is currently unleased for oil and gas.

Conclusions

The average net return on asset from classified forest for all the trusts is 5.7%, which includes land appreciation. The income return from the Trust and Legacy funds, based on current market conditions, is expected to stay in 7-8 percent range over the next few years according to the Board of Investments.

Using the gross revenue to calculate the return on asset increases it to 6.8%. Management costs have a relatively minor effect on the overall return. For example, cutting management costs by

50% can increase this return by approximately .56%. The majority of the return on asset value is in land appreciation.

Bob Bugni, CFA is Assistant Investment Office-Fixed Income with the Montana Board of Investments. He was asked the following question: "Given your knowledge of investment analysis, would you recommend converting some of the land portion of the trust into cash that would be invested in the Trust & Legacy fund?" The following is his response.

"Selling land and reinvesting the proceeds in the Trust & Legacy (T&L) account should increase the income yield. New cash flow can currently be invested at a 7.5 to 8.0 percent bond equivalent yield. However, over the long-term, this may not be the best investment choice. The T&L account, by constitution, is prohibited from investing in common stocks. Therefore, investments are limited to bonds. Historically, bonds return less than stocks and bonds do not protect the investor from inflation. Over the long-term, real estate (including land) produces a higher total return than bonds. Real estate produces less current income than bonds but part of the total return comes from appreciation. Bonds do not generally appreciate in value over time. Therefore, real estate is a better hedge against inflation than bonds. The income yield increases over time when the investor raises rental rates plus the buying power of investment increases over time as the land value increases."

ABBREVIATIONS

AFY	acre-feet per year	MEPA	Montana Environmental Policy Act
AUM	animal unit month	MPC	Montana Power Company
BBLs	barrels	MSCA	Montana Salinity Control Association
BIA	Bureau of Indian Affairs, U.S. Department of the Interior	MSU	Montana State University
BLM	Bureau of Land Management, U.S. Department of the Interior	NACD	National Association of Conservation Districts
BMP	best management practice	NPS	nonpoint source
BOGC	Board of Oil and Gas Conservation	NRCS	Natural Resources Conservation Service, U.S. Department of Agriculture
BPMC	Bridger Plant Materials Center	PL	public law
CARDD	Conservation and Resource Development Division	RCAC	Resource Conservation Advisory Council
CD	conservation district	RC&D	resource conservation and development
CDB	Conservation Districts Bureau	RDB	Resource Development Bureau
cfs	cubic feet per second	RDGP	Reclamation and Development Grants Program
CRM	coordinated resource management	RFP	request for proposal
CRP	Conservation Reserve Program	RIT	resource indemnity tax
CSD	Centralized Services Division	RRGLP	Renewable Resource Grant and Loan Program
DEQ	Montana Department of Environmental Quality	RWRCC	Reserved Water Rights Compact Commission
DFWP	Montana Department of Fish, Wildlife and Parks	SABHRS	Statewide Accounting, Budgeting, and Human Resources System
DNRC	Montana Department of Natural Resources and Conservation	SFLMP	State Forest Land Management Plan
DWSRF	Drinking Water State Revolving Fund	SMZ	streamside management zone
EIS	environmental impact statement	SRF	State Revolving Fund
EPA	U.S. Environmental Protection Agency	SUPJV	Seven-Up Pete Joint Venture
FEMA	Federal Emergency Management Agency	TMDL	total maximum daily load
FERC	Federal Energy Regulatory Commission	TSEP	Treasure State Endowment Program
FWS	Fish and Wildlife Service, U.S. Department of the Interior	UIC	underground injection control
FY	fiscal year	USBR	Bureau of Reclamation, U.S. Department of the Interior
GIS	geographic information system	USDA	U.S. Department of Agriculture
HRA	Hazard Reduction Agreement	USFS	Forest Service, U.S. Department of Agriculture
ITB	Information Technology Bureau	USGS	Geological Survey, U.S. Department of the Interior
MACD	Montana Association of Conservation Districts	WMB	Water Management Bureau
MBF	thousand board feet	WPCSRF	Water Pollution Control State Revolving Fund
MBMG	Montana Bureau of Mines and Geology	WRD	Water Resources Division
MCA	<i>Montana Code Annotated</i>		
MCF	thousand cubic feet		

Front cover photos

(clockwise from upper left)

- Wildfire near Boulder—DONNIE SEXTON, TRAVEL MONTANA
- Crown fire—MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (DNRC)
- Fireline construction—MONTANA DNRC
- Firefighters boarding helicopter—BOB ZELLAR, BILLINGS GAZETTE,
www.montanafires.com
- DNRC firefighters—MONTANA DNRC
- Water drop (center)—MONTANA DNRC

Back cover photo

- Wildfire near Boulder—DONNIE SEXTON, TRAVEL MONTANA

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